

aaatttgaac aggttaattct gttggattct aatgcagttc atcacatcat tcatgatttt
480
cagcccatg ttatagtaca ttgtgcagca gagagaagac cagatgttgt agaaaatcag
540
ccagatgctg cctctcaact taatgtggat gcttctggga atttagcaaa ggaagcagct
600
gctgttggag catttctcat ctacattagc tcagattatg tatttgatgg aacaaatcca
660
ccttacagag aggaagacat accagctccc cttaaattgt atggcaaaac aaaattagat
720
ggagaaaagg ctgtcctgga gaacaatcta ggagctgctg ttttgaggat tctattctg
780
tatggggaag ttgaaaagct cgaagaaagt gctgtgactg ttatgtttga taaagtgcag
840
ttcagcaaca agtcagcaaa catggatcac tggcagcaga gggtcccccac acatgtcaaa
900
gatgtggcca ctgtgtgccg gcagctagca gagaagagaa tgctggatcc atcaattaag
960
ggaacctttc actggtctgg caatgaacag atgactaagt atgaaatggc atgtgcaatt
1020
gcagatgctt tcaacctccc cagcagtcac ttaagacctt ttactgacag ccctgtccta
1080
ggagcacaac gtccgagaaa tgctcagctt gactgtccca aattggagac cttgggcatt
1140
ggccaacgaa caccatttctg aattggaatc aaagaatcac tttggccttt cctcattgac
1200
aagagatgga gacaaacggt ctttcattag tttatttgtg ttgggttctt ttttttttt
1260
aaatgaaaag tatagtatgt ggcaactttt aaagaacaaa ggaaatagtt ttgtatgagt
1320
actttaattg tgactcttag gatctttcag gtaaatgatg ctcttgcaact agtgaaattg
1380
tctaaagaaa ctaaagggca gtcatgccct gtttgcaagta atttttcttt ttatcatttt
1440
gtttgtcctg gctaaacttg gagtttgagt atagtaaatt atgatcctta aatatttgag
1500
agtcaggatg aagcagatct gctgtagact tttcagatga aattgttcat tctcgtaacc
1560
tccatatttt caggattttt gaagctgttg accttttcat gttgattatt ttaaattgtg
1620
tgaaatagta taaaaatcat tgggtgttcat tatttgcttt gcctgagctc agatcaaaat
1680
gtttgaagaa aggaacttta tttttgcaag ttacgtacag tttttatgct tgagatattt
1740
caacatgtta tgtatattgg aacttctaca gcttgatgcc tctgctttt atagcagttt
1800
atggggagca cttgaaagag cgtgtgtaca tgtatttttt ttctaggcaa acattgaatg
1860
caaacgtgta tttttttaat ataaatatat aactgtcctt ttcaccccat gttgccgcta
1920
agtgatattt catatgtgtg gttatactca taataatggg ccttgtaagt cttttcacca
1980
ttcatgaata ataataaata tgtactgctg gcatgtaatg cttagttttc ttgtatttac
2040

1220 1225 1230
 Ser Cys Asp Thr Lys Leu Gln Gly Ala Val Cys Gly Val Ser Ser Gly
 1235 1240 1245
 Pro Pro Pro Pro Arg Arg Ile Ser Tyr His Gly Ser Cys Pro Gln Gly
 1250 1255 1260
 Leu Ala Asp Ser Ala Trp Ile Pro Phe Arg Glu His Cys Tyr Ser Phe
 1265 1270 1275 1280
 His Met Glu Leu Leu Leu Gly His Lys Glu Ala Arg Gln Arg Cys Gln
 1285 1290 1295
 Arg Ala Gly Gly Ala Val Leu Ser Ile Leu Asp Glu Met Glu Asn Val
 1300 1305 1310
 Phe Val Trp Glu His Leu Gln Ser Tyr Glu Gly Gln Ser Arg Gly Ala
 1315 1320 1325
 Trp Leu Gly Met Asn Phe Asn Pro Lys Gly Gly Thr Leu Val Trp Gln
 1330 1335 1340
 Asp Asn Thr Ala Val Asn Tyr Ser Asn Trp Gly Pro Pro Gly Leu Gly
 1345 1350 1355 1360
 Pro Ser Met Leu Ser His Asn Ser Cys Tyr Trp Ile Gln Ser Asn Ser
 1365 1370 1375
 Gly Leu Trp Arg Pro Gly Ala Cys Thr Asn Ile Thr Met Gly Val Val
 1380 1385 1390
 Cys Lys Leu Pro Arg Ala Glu Gln Ser Ser Phe Ser Pro Ser Ala Leu
 1395 1400 1405
 Pro Glu Asn Pro Ala Ala Leu Val Val Val Leu Met Ala Val Leu Leu
 1410 1415 1420
 Leu Leu Ala Leu Leu Thr Ala Ala Leu Ile Leu Tyr Arg Arg Arg Gln
 1425 1430 1435 1440
 Ser Ile Glu Arg Gly Ala Phe Glu Gly Ala Arg Tyr Ser Arg Ser Ser
 1445 1450 1455
 Ser Ser Pro Thr Glu Ala Thr Glu Lys Asn Ile Leu Val Ser Asp Met
 1460 1465 1470
 Glu Met Asn Glu Gln Gln Glu
 1475

<210> 5831

<211> 2216

<212> DNA

<213> Homo sapiens

<400> 5831

nntccccgtt tattcatctt tggttcgat ttctcgatct tacaagttcg taggtttgag
 60
 aaagaacagg aaaaggtgct ttctcacaaa taacatgtgc tggagatgac aacttattga
 120
 actcttaagt tctcagcact atgttatgca cttgacgggc attacttta tcttccactg
 180
 tgagatactt gttattgcct cattttgtag acgagaaaac gggcatagag ggtgagacat
 240
 tggcccagg tcatccgta agggttggag cctggaattc agatacagga ggaagttaac
 300
 atccctaata ggagggttct ggttactggt gccactgggc ttcttggcag agctgtacac
 360
 aaagaatttc agcagaataa ttggcatgca gttggctgtg gtttcagaag agcaagacca
 420


```

785          790          795          800
Asp Thr Gln Leu Asp Trp Ile Cys Lys Ile Pro Arg Gly Thr Asp Val
      805          810          815
Arg Glu Pro Asp Asp Ser Pro Gln Gly Arg Arg Glu Trp Leu Arg Phe
      820          825          830
Gln Glu Ala Glu Tyr Lys Phe Phe Glu His His Ser Thr Trp Ala Gln
      835          840          845
Ala Gln Arg Ile Cys Thr Trp Phe Gln Ala Glu Leu Thr Ser Val His
      850          855          860
Ser Gln Ala Glu Leu Asp Phe Leu Ser His Asn Leu Gln Lys Phe Ser
865          870          875          880
Arg Ala Gln Glu Gln His Trp Trp Ile Gly Leu His Thr Ser Glu Ser
      885          890          895
Asp Gly Arg Phe Arg Trp Thr Asp Gly Ser Ile Ile Asn Phe Ile Ser
      900          905          910
Trp Ala Pro Gly Lys Pro Arg Pro Val Gly Lys Asp Lys Lys Cys Val
      915          920          925
Tyr Met Thr Ala Ser Arg Glu Asp Trp Gly Asp Gln Arg Cys Leu Thr
      930          935          940
Ala Leu Pro Tyr Ile Cys Lys Arg Ser Asn Val Thr Lys Glu Thr Gln
945          950          955          960
Pro Pro Asp Leu Pro Thr Thr Ala Leu Gly Gly Cys Pro Ser Asp Trp
      965          970          975
Ile Gln Phe Leu Asn Lys Cys Phe Gln Val Gln Gly Gln Glu Pro Gln
      980          985          990
Ser Arg Val Lys Trp Ser Glu Ala Gln Phe Ser Cys Glu Gln Gln Glu
      995          1000          1005
Ala Gln Leu Val Thr Ile Thr Asn Pro Leu Glu Gln Ala Phe Ile Thr
      1010          1015          1020
Ala Ser Leu Pro Asn Val Thr Phe Asp Leu Trp Ile Gly Leu His Ala
1025          1030          1035          1040
Ser Gln Arg Asp Phe Gln Trp Val Glu Gln Glu Pro Leu Met Tyr Ala
      1045          1050          1055
Asn Trp Ala Pro Gly Glu Pro Ser Gly Pro Ser Pro Ala Pro Ser Gly
      1060          1065          1070
Asn Lys Pro Thr Ser Cys Ala Val Val Leu His Ser Pro Ser Ala His
      1075          1080          1085
Phe Thr Gly Arg Trp Asp Asp Arg Ser Cys Thr Glu Glu Thr His Gly
      1090          1095          1100
Phe Ile Cys Gln Lys Gly Thr Asp Pro Ser Leu Ser Pro Ser Pro Ala
1105          1110          1115          1120
Ala Leu Pro Pro Ala Pro Gly Thr Glu Leu Ser Tyr Leu Asn Gly Thr
      1125          1130          1135
Phe Arg Leu Leu Gln Lys Pro Leu Arg Trp His Asp Ala Leu Leu Leu
      1140          1145          1150
Cys Glu Ser His Asn Ala Ser Leu Ala Tyr Val Pro Asp Pro Tyr Thr
      1155          1160          1165
Gln Ala Phe Leu Thr Gln Ala Ala Arg Gly Leu Arg Thr Pro Leu Trp
      1170          1175          1180
Ile Gly Leu Ala Gly Glu Glu Gly Ser Arg Arg Tyr Ser Trp Val Ser
1185          1190          1195          1200
Glu Glu Pro Leu Asn Tyr Val Gly Trp Gln Asp Gly Glu Pro Gln Gln
      1205          1210          1215
Pro Gly Gly Cys Thr Tyr Val Asp Val Asp Gly Ala Trp Arg Thr Thr

```

355 360 365
 Pro Thr Pro Pro Asp Arg Trp Ala Asn Val Lys Val Glu Cys Glu Pro
 370 375 380
 Ser Trp Gln Pro Phe Gln Gly His Cys Tyr Arg Leu Gln Ala Glu Lys
 385 390 395 400
 Arg Ser Trp Gln Glu Ser Lys Lys Ala Cys Leu Arg Gly Gly Gly Asp
 405 410 415
 Leu Val Ser Ile His Ser Met Ala Glu Leu Glu Phe Ile Thr Lys Gln
 420 425 430
 Ile Lys Gln Glu Val Glu Glu Leu Trp Ile Gly Leu Asn Asp Leu Lys
 435 440 445
 Leu Gln Met Asn Phe Glu Trp Ser Asp Gly Ser Leu Val Ser Phe Thr
 450 455 460
 His Trp His Pro Phe Glu Pro Asn Asn Phe Arg Asp Ser Leu Glu Asp
 465 470 475 480
 Cys Val Thr Ile Trp Gly Pro Glu Gly Arg Trp Asn Asp Ser Pro Cys
 485 490 495
 Asn Gln Ser Leu Pro Ser Ile Cys Lys Lys Ala Gly Gln Leu Ser Gln
 500 505 510
 Gly Ala Ala Glu Glu Asp His Gly Cys Arg Lys Gly Trp Thr Trp His
 515 520 525
 Ser Pro Ser Cys Tyr Trp Leu Gly Glu Asp Gln Val Thr Tyr Ser Glu
 530 535 540
 Ala Arg Arg Leu Cys Thr Asp His Gly Ser Gln Leu Val Thr Ile Thr
 545 550 555 560
 Asn Arg Phe Glu Gln Ala Phe Val Ser Ser Leu Ile Tyr Asn Trp Glu
 565 570 575
 Gly Glu Tyr Phe Trp Thr Ala Leu Gln Asp Leu Asn Ser Thr Gly Ser
 580 585 590
 Phe Phe Trp Leu Ser Gly Asp Glu Val Met Tyr Thr His Trp Asn Arg
 595 600 605
 Asp Gln Pro Gly Tyr Ser Arg Gly Gly Cys Val Ala Leu Ala Thr Gly
 610 615 620
 Ser Ala Met Gly Leu Trp Glu Val Lys Asn Cys Thr Ser Phe Arg Ala
 625 630 635 640
 Arg Tyr Ile Cys Arg Gln Ser Leu Gly Thr Pro Val Thr Pro Glu Leu
 645 650 655
 Pro Gly Pro Asp Pro Thr Pro Ser Leu Thr Gly Ser Cys Pro Gln Gly
 660 665 670
 Trp Ala Ser Asp Thr Lys Leu Arg Tyr Cys Tyr Lys Val Phe Ser Ser
 675 680 685
 Glu Arg Leu Gln Asp Lys Lys Ser Trp Val Gln Ala Gln Gly Ala Cys
 690 695 700
 Gln Glu Leu Gly Ala Gln Leu Leu Ser Leu Ala Ser Tyr Glu Glu Glu
 705 710 715 720
 His Phe Val Ala Asn Met Leu Asn Lys Ile Phe Gly Glu Ser Glu Pro
 725 730 735
 Glu Ile His Glu Gln His Trp Phe Trp Ile Gly Leu Asn Arg Arg Asp
 740 745 750
 Pro Arg Gly Gly Gln Ser Trp Arg Trp Ser Asp Gly Val Gly Phe Ser
 755 760 765
 Tyr His Asn Phe Asp Arg Ser Arg His Asp Asp Asp Ile Arg Gly
 770 775 780
 Cys Ala Val Leu Asp Leu Ala Ser Leu Gln Trp Val Ala Met Gln Cys

cttgaaagaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
5747

<210> 5830

<211> 1479

<212> PRT

<213> Homo sapiens

<400> 5830

```

Met Gly Pro Gly Arg Pro Ala Pro Ala Pro Trp Pro Arg His Leu Leu
 1           5           10           15
Arg Cys Val Leu Leu Gly Cys Leu His Leu Gly Arg Pro Gly Ala
 20           25           30
Pro Gly Asp Ala Ala Leu Pro Glu Pro Asn Val Phe Leu Ile Phe Ser
 35           40           45
His Gly Leu Gln Gly Cys Leu Glu Ala Gln Gly Gly Gln Val Arg Val
 50           55           60
Thr Pro Ala Cys Asn Thr Ser Leu Pro Ala Gln Arg Trp Lys Trp Val
 65           70           75           80
Ser Arg Asn Arg Leu Phe Asn Leu Gly Thr Met Gln Cys Leu Gly Thr
 85           90           95
Gly Trp Pro Gly Thr Asn Thr Thr Ala Ser Leu Gly Met Tyr Glu Cys
100           105           110
Asp Arg Glu Ala Leu Asn Leu Arg Trp His Cys Arg Thr Leu Gly Asp
115           120           125
Gln Leu Ser Leu Leu Leu Gly Ala Arg Thr Ser Asn Ile Ser Lys Pro
130           135           140
Gly Thr Leu Glu Arg Gly Asp Gln Thr Arg Ser Gly Gln Trp Arg Ile
145           150           155           160
Tyr Gly Ser Glu Glu Asp Leu Cys Ala Leu Pro Tyr His Glu Val Tyr
165           170           175
Thr Ile Gln Gly Asn Ser His Gly Lys Pro Cys Thr Ile Pro Phe Lys
180           185           190
Tyr Asp Asn Gln Trp Phe His Gly Cys Thr Ser Thr Gly Arg Glu Asp
195           200           205
Gly His Leu Trp Cys Ala Thr Thr Gln Asp Tyr Gly Lys Asp Glu Arg
210           215           220
Trp Gly Phe Cys Pro Ile Lys Ser Asn Asp Cys Glu Thr Phe Trp Asp
225           230           235           240
Lys Asp Gln Leu Thr Asp Ser Cys Tyr Gln Phe Asn Phe Gln Ser Thr
245           250           255
Leu Ser Trp Arg Glu Ala Trp Ala Ser Cys Glu Gln Gln Gly Ala Asp
260           265           270
Leu Leu Ser Ile Thr Glu Ile His Glu Gln Thr Tyr Ile Asn Gly Leu
275           280           285
Leu Thr Gly Tyr Ser Ser Thr Leu Trp Ile Gly Leu Asn Asp Leu Asp
290           295           300
Thr Ser Gly Gly Trp Gln Trp Ser Asp Asn Ser Pro Leu Lys Tyr Leu
305           310           315           320
Asn Trp Glu Ser Asp Gln Pro Asp Asn Pro Ser Glu Glu Asn Cys Gly
325           330           335
Val Ile Arg Thr Glu Ser Ser Gly Gly Trp Gln Asn Arg Asp Cys Ser
340           345           350
Ile Ala Leu Pro Tyr Val Cys Lys Lys Lys Pro Asn Ala Thr Ala Glu

```

cagagctatg agggccagag tcggggcgcc tggctgggca tgaacttcaa ccccaaagga
4140
ggcactctgg tctggcagga caacacagct gtgaactact ccaactgggg gccccgggc
4200
ttgggccccca gcatgctgag ccacaacagc tgctactgga ttcagagcaa cagcgggcta
4260
tggcgccccg gcgcttgac caacatcacc atgggtgtcg tctgcaagct tcctcgtgct
4320
gagcagagca gcttctcccc atcagcgctt ccagagaacc cagcggccct ggtggtggtg
4380
ctgatggcgg tgctgtgct cctggccttg ctgaccgcag ccctcatcct ttaccggagg
4440
cgccagagca tcgagcgagg ggcctttgag ggtgcccgt acagccgcag cagctccagc
4500
cccaccgagg cactgagaa gaacatcctg gtgtcagaca tggaaatgaa tgagcagcaa
4560
gaatagagcc aggcgcgtgg gcagggccag ggcgggagga gctggggagc tggggccctg
4620
ggtcagctctg gccccccacc agctgcctgt ccagttggcc tattgaaggg tgcccttggg
4680
agtcgctgtt gggagccgga gctgggcaga gctgggctg gtggggtgcc accctcccac
4740
aagggtggg ctgagacca gcaaagagca gcgtggcgtt tccctttctg gggggccctg
4800
aggtcttctg acctggtcct gtgccccac aggaaccaga ggtaggatg gagggggaac
4860
gagagcctct ttctccccag agccccggc ccaggcctgt tgatccgcgc ccaggaccc
4920
ccttctttgc agagcccag gagectcccc tgteccctcg ggcagatctg ttgtgtctct
4980
cttccacct ggcagcctca gctctgtgcc cctcaccctg ctccctctcg ccccttctct
5040
cccacccctt ccttctgagc cgggccctgg ggattgggga gccctcttgt tcctgatgag
5100
ggtcagctga gggggctgag catccatcac tcctgtgcct gctggggtgg ctgtggggcg
5160
tggcaggagg ggcctaggtg ggttgggcct gagaaccagg gcacgggtgt ggtgtctgct
5220
gggctggaga taagactggg gagagacacc ccaacctccc aggggtgggag ctgggcccgg
5280
ctgggatgtc atctcctgcc gggcggggga gggctctgcc cctggaagag tcccctgtgg
5340
ggacaaaaat aagtcccta acatctccag ctctggctc tggtttgag caaggggaag
5400
ggttgccaga gtccctggggg cccagagga gcaggagtct gggagggcc agagttcacc
5460
ctctagtga tccaggagga gcagcaccg agccctggag tggcccagta cccttccaag
5520
aggccacagt cccagccagg acaagtatg cggcccatcc tgggtgcgaca gcgtgggaca
5580
atgtgaacat ggactcgaag acatggccct ttctctgtag ttgatttttt aaatgtgcca
5640
ttattgtttt taaaaaaaaa ggaaaaaaga aaagcaaaca aataaaacac ctttaagagg
5700

gacgacgaca tccgaggctg tgcggtgctg gacctggcct ccctgcagtg ggtggccatg
2520
cagtgcgaca cacagctgga ctggatctgc aagatcccca gaggtacgga cgtgcgggag
2580
cccgacgaca gccctcaagg ccgacgggaa tggctgcgct tccaggaggc cgagtacaag
2640
ttctttgagc accactccac gtgggcgag ggcagcgca tctgcacgtg gttccaggcc
2700
gagctgacct ccgtgcacag ccaggcggag ctagacttcc tgagccaca cttgcagaag
2760
ttctccggg cccaggagca gactggtg atcggcctgc acacctctga gagcgatggg
2820
cgcttcagat ggacagatgg ttccattata aacttcatct cctgggcacc aggcaaacct
2880
cggcctgtcg gcaaggaca gaagtgcgtg tacatgacag ccagccgaga ggactggggg
2940
gaccagaggt gcctgacagc cttgccctac atctgcaagc gcagcaacgt caccaaagaa
3000
acgcagcccc cagacctgcc aactacagcc ctggggggct gcccctctga ctggatccag
3060
ttctcaaca agtgttttca ggtccagggc caggaacccc agagccgggt gaagtggtea
3120
gaggcacagt tctcctgtga acagcaagag gccagctgg tcaccatcac aaacccctta
3180
gagcaagcat tcacacagc cagcctgccc aatgtgacct ttgaccttg gattggcctc
3240
catgcctcgc agagggactt ccagtgggtg gagcaggagc ctttgatgta tgccaactgg
3300
gcacctgggg agccctctgg ccctagccct gctcccagtg gcaacaaacc gaccagctgt
3360
gcggtgggtc tgcacagccc ctcagccac ttcactggcc gctgggacga tcggagctgc
3420
acggaggaga cccatggctt catctgccag aagggcacgg acccctccct gagcccgctc
3480
ccagcagcgc tgccccccgc cccgggact gagctctcct acctcaacgg caccttcgg
3540
ctgcttcaga agccgtgcg ctggcacgat gccctcctgc tgtgtgagag ccacaatgcc
3600
agcctggcct acgtgcccga cccctacacc caggccttcc tcacgcaggc tgcccagggg
3660
ctgcgcacgc cgctctggat tgggctggct ggcgaggagg gctctcggcg gtactcctgg
3720
gtctcagagg agccgtgaa ctacgtgggc tggcaggacg gggagccgca gcagccgggg
3780
ggctgtacct acgtagatgt ggacggggcc tggcgacca ccagctgtga caccaagctg
3840
cagggggctg tgtgtggggt tagcagtggg cccctcctc cccgaagaat aagctaccat
3900
ggcagctgtc cccagggact ggcagactcc gcgtggattc ccttcggga gactgctat
3960
tctttccaca tggagctgct gctgggccac aaggaggcgc gacagcgctg ccagagagcg
4020
ggtggggccg tcctgtctat cctggatgag atggagaatg tgttgtctg ggagcacctg
4080

tgggacaagg accagctgac tgacagctgc taccagttta acttccagtc cacgctgtcg
900
tggagggagg cctgggccag ctgcgagcag caggggtgcgg atctgtgag catcacggag
960
atccacgagc agacctacat caacggcctc ctactgggt acagctccac cctgtggatc
1020
ggcttgaatg acttggacac gagcggaggc tggcagtggc cggacaactc gccctcaag
1080
tacctcaact gggagagtga ccagccggac aacccagtg aggagaactg tggagtgate
1140
cgcactgagt cctcggggcg ctggcagaac cgtgactgca gcatcgcgct gccctatgtg
1200
tgcaagaaga agcccaacgc cacggccgag cccacccctc cagacagggtg ggccaatgtg
1260
aagggtggagt gcgagccgag ctggcagccc ttccagggcc actgctaccg cctgcaggcc
1320
gagaagcgca gctggcagga gtccaagaag gcatgtctac ggggcggtgg cgacctggtc
1380
agcatccaca gcatggcgga gctggaattc atcaccaagc agatcaagca agaggtggag
1440
gagctgtgga tcggcctcaa cgatttgaaa ctgcagatga attttgagtg gtctgacggg
1500
agccttgtga gcttcaccca ctggcacccc tttgagccca acaacttccg ggacagtctg
1560
gaggactgtg tcaccatctg gggcccggaa ggccgctgga acgacagtcc ctgtaaccag
1620
tccttgccat ccatctgcaa gaaggcaggc cagctgagcc agggggccgc cgaggaggac
1680
catggctgcc ggaaggggtg gacgtggcac agccatcct gctactggct gggagaagac
1740
caagtgaact acagtgaggc ccggcgccctg tgcactgacc atggctctca gctggtcacc
1800
atcaccaaca ggttcgagca ggccttcgtc agcagcctca tctacaactg ggagggcgag
1860
tacttctgga cggccctgca ggacctcaac agcaccggct ccttcttctg gctcagtggg
1920
gatgaagtca tgtacaccca ctggaaccgg gaccagcccg ggtacagccg tgggggctgc
1980
gtggcgctgg ccaactggcag cgccatgggg ctgtgggagg tgaagaactg tacctcgttc
2040
cgggcccgcct acatctgccg gcagagcctg ggcactccag tgacgcccga gctgccgggg
2100
ccagatccca cggccagcct cactggctcc tgtecccagg gctgggcctc ggacacaaa
2160
ctccggtatt gctataaggt gttcagctca gagcggctgc aggacaagaa gagctgggtc
2220
caggcccagg gggcctgcca ggagctgggg gccagctgc tgagcctggc cagctacgag
2280
gaggagcact ttgtggccaa catgctcaac aagatcttcg gtgaatcaga acccgagatc
2340
cacgagcagc actggttctg gatcggcctg aaccgtcggg atcccagagg gggtcagagt
2400
tggcgctgga gcgacggcgt agggttctct taccacaatt tcgaccggag ccggcacgac
2460

<211> 106
 <212> PRT
 <213> Homo sapiens

<400> 5828
 Met Pro Pro Pro Ser Tyr Leu Pro Pro Leu Cys Trp Cys Thr Ser Pro
 1 5 10 15
 Asn Ser Phe Leu Leu His Ser Ser Leu Tyr Leu Thr Ile Phe Met Ser
 20 25 30
 Pro Thr Ser Cys Phe His Leu Phe Trp Ala Arg His Arg Leu Ser Asn
 35 40 45
 Trp Glu Arg Pro Leu Phe Ile Lys Leu Gly Phe Phe Leu Ile Ser Leu
 50 55 60
 Pro Asn Val Val Ser Gln Tyr Ser Ser Tyr Ser Ser Leu Gln Gly Val
 65 70 75 80
 Ala Glu Pro Thr Trp Ser Phe Glu Thr Gly Pro Gln Ala Gly Ala Phe
 85 90 95
 Asn Leu Asp Ser Leu Ala Cys Cys Asp Pro
 100 105

<210> 5829
 <211> 5747
 <212> DNA
 <213> Homo sapiens

<400> 5829
 nnggcacgag cggaggagga cgcgagcccc ttgcgggagg tcatcacagc ccagcctcgg
 60
 ggctgccaca gcgcgttgcg cctgtgcgcc ctcggtcccc gcgtccactg agcgccgcgc
 120
 tcggggatgg ggcccggcgg gccggccccc gcgccctggc ctcgtcacct gctgcgctgc
 180
 gtctgtctcc tcgggtgcct gcacctcggc cgtccccggc cccctgggga cgcgcacctc
 240
 ccggaaccca acgtcttctt catcttcagc catggactgc agggctgcct ggaggccag
 300
 ggcgggcagg tcagagtcac cccggcttgc aataccagcc tccctgcca gcgctggaag
 360
 tgggtctccc gaaaccggct attcaacctg ggtaccatgc agtgcttggg cacaggctgg
 420
 ccaggcacca acaccacggc ctccctgggc atgtatgagt gtgaccggga agcactgaat
 480
 cttcgctggc attgtcgtag actgggtgac cagctgtcct tgctcttggg ggcccgcacc
 540
 agcaacatat ccaagcctgg cacccttgag cgtggtgacc agaccgcag tggccagtgg
 600
 cgcctctacg gcagcgagga ggacctatgt gctctgccct accacgaggt ctacaccatc
 660
 cagggaaact cccacggaaa gccgtgcacc atccccttca aatatgacaa ccagtgggtc
 720
 cacggctgca ccagcacggg ccgcgaggat ggtcacctgt ggtgtgccac caccaggac
 780
 tacggcaaag acgagcgctg gggcttctgc cccatcaaga gtaacgactg cgagaccttc
 840

caaggagtgt caccatcaga ggcttctctt catttgtgtca aagaagcccc tagctgtctt
 1740
 cgtggcctcc ttccccact ccctatccct tcacctgtga aatgcctttg ctttgcata
 1800
 tgtgtgtgga tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tatgtgtgtg cttctgtgtg
 1860
 tgcctaatagc tctgtctctt ggctactgaa gcacccaaat aaagaatttc cctcatgggc
 1920
 cagactaaaa aaaaaaaaaa
 1940

<210> 5826

<211> 88

<212> PRT

<213> Homo sapiens

<400> 5826

Val	His	Thr	Asp	Arg	Phe	Phe	Leu	Val	Thr	Leu	Arg	Arg	Glu	Phe	Gln
1				5					10				15		
Gly	Val	Ser	Pro	Ser	Glu	Ala	Ser	Leu	His	Cys	Val	Lys	Glu	Ala	Pro
			20					25				30			
Ser	Cys	Ser	Arg	Gly	Leu	Leu	Pro	Pro	Leu	Pro	Ile	Pro	Ser	Pro	Val
		35					40				45				
Lys	Cys	Leu	Cys	Phe	Ala	Tyr	Cys	Val	Trp	Met	Cys	Val	Cys	Val	Cys
	50					55				60					
Val	Cys	Val	Cys	Val	Cys	Val	Cys	Phe	Cys	Val	Cys	Leu	Met	Leu	Cys
65				70					75				80		
Leu	Leu	Val	Thr	Glu	Ala	Ser	Lys								
							85								

<210> 5827

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5827

ttttaggcaa cacttcgtat gttttaagag ctaaagcaac taagaacaca gtactgtgac
 60
 ccacactaag gaatccaggg aagagaagca ttgccttagg ggacacagca agccagagag
 120
 tccagattaa aagctccagc ttgggggcct gtttcaaag accaggtagg ttcagccacc
 180
 ccctggagac tcgaatagga agaatactga gatacaacat ttgggagaga gatgagaaag
 240
 aagcccagct ttataaagag ggggcgttcc cagttactta atctatgcct ggcccagaaa
 300
 aggtgaaaaac atgaggtggg ggacatgaaa attgttaaat aaagtgaact gtgcagtaag
 360
 aatgagttgg gcgaggtgca ccagcagagg ggaggcaggt aggaaggagg aggcagatg
 420
 aggggggag
 428

<210> 5828

aaatacagac caaatgtcac ctctctgttc tgtcattctt ttatcactca gcagacagct
120
agtctggggc aggctctacg ctggaacgag ggacacagga atgagggatt ttttccacac
180
cccaggaagc acataggcac acagtctgtg cctccttagc actgtggcct ctgggttctc
240
atcagggcca gcaacctcac ctgcctcac ctgtccgtcc ttagaagggc attgtacac
300
tctgaaaagc aacggtcttc aggttccttc tttctggatt actaagatct tgattttgat
360
gtgtttcagc tggaaagggc taccctgca aaacatgtaa gatagtgtg aactccatag
420
aacagtacca agctcatgtc agcggcttca aacacaagaa ccagtcacca aaaacagtgg
480
catcatccct gggccagatt ccaatgcaa ggcaaccat tcagaaagac tcaaccacct
540
tggaagacta gaggtgatc tgcccagcat cccatattgg gccagccatg agccagcttc
600
ccgtgactgc tcagcccttg gctccctctt gctcgttgtt ctcaccagga aagtacacgg
660
gcctgaggca ggattgggac acagacagcc tctcattggt ccgggctaact tcaactcctg
720
tgctccccct tggcaggggt cctgtaggtc atgacagggg aggcaagggg attgagagac
780
tcgggggtctc ggggggtggt agtttgaggg gtggctttcc ccatttccca acccctctgg
840
gccttaggtg ctgaggcccc tgccacctgt ctttctcta aaggtcagtt ttgggccagt
900
tcttgcaact aaagagcaga gatctctctg ggccctagac atttccagca aaacctggaa
960
ctttcatgcc aaacctgggg cagggcagga aacagaggaa atggctgcaa catgggagct
1020
tgagactaat acgacactct gccttcccc agaaggtgca ggctttcctg agtcttagac
1080
cagatatggc cagttgcga ggtttctgcc aactgtgaag tatcctcctg gagcagtgc
1140
acaatcttgg cggagcattg ctacccccgc tgccccctcc acagttcctg aatggtgcta
1200
aggtatgca gcagttggca acgagctggg gctgggggag gcctccatgt ccaactgagat
1260
cataggacac tccaatgggg atgggacctt tccccctc catcagaggt gctctgaccc
1320
taggttacac gggaaagtgc cccacatgca agtctccctg agggttctgc ccctaaaggc
1380
agactgcctc atgcccgcta gctgtgaggt tcattgctac cctcgccct actagccctc
1440
tcttccccct tgtgcagcgg accacttgcc cagtttgctg tgggtgctagc cttccccatc
1500
atccaccggg tgatttctgg gtcccagga aagaaagaga gagctgatgc aggtttctac
1560
agtgaggaac aggcgtttcc caggccccac acccagattt ctctatcttt gctgtgtttt
1620
atggcctggg actgagtcca caggataga ttttctctg taaccttgag acgagaattc
1680

aagattaggt tttgttattg atagtattaa atacacagtt tctcttaaca gtgatgggtg
 2400
 aaaacatttt accggattat ggaatgttta ccagaacatg ttttgattct tgaatgtaca
 2460
 taataatgcc atctaactta tttacgttct tgtttacatg tgggagcttt tgttttcaaa
 2520
 aattattttg ttaaaaaatc tcaataaaga tttattattg ttgttctttt ctaaaaaaaaa
 2580
 aaaaa
 2585

<210> 5824

<211> 213

<212> PRT

<213> Homo sapiens

<400> 5824

Met	Ala	Ser	Leu	Phe	Lys	Lys	Lys	Thr	Val	Asp	Asp	Val	Ile	Lys	Glu
1				5					10					15	
Gln	Asn	Arg	Glu	Leu	Arg	Gly	Thr	Gln	Arg	Ala	Ile	Ile	Arg	Asp	Arg
			20					25					30		
Ala	Ala	Leu	Glu	Lys	Gln	Glu	Lys	Gln	Leu	Glu	Leu	Glu	Ile	Lys	Lys
		35					40					45			
Met	Ala	Lys	Ile	Gly	Asn	Lys	Glu	Ala	Cys	Lys	Val	Leu	Ala	Lys	Gln
	50				55					60					
Leu	Val	His	Leu	Arg	Lys	Gln	Lys	Thr	Arg	Thr	Phe	Ala	Val	Ser	Ser
65				70					75					80	
Lys	Val	Thr	Ser	Met	Ser	Thr	Gln	Thr	Lys	Val	Met	Asn	Ser	Gln	Met
			85					90						95	
Lys	Met	Ala	Gly	Ala	Met	Ser	Thr	Thr	Ala	Lys	Thr	Met	Gln	Ala	Val
			100					105					110		
Asn	Lys	Lys	Met	Asp	Pro	Gln	Lys	Thr	Leu	Gln	Thr	Met	Gln	Asn	Phe
		115					120					125			
Gln	Lys	Glu	Asn	Met	Lys	Met	Glu	Met	Thr	Glu	Glu	Met	Ile	Asn	Asp
	130				135					140					
Thr	Leu	Asp	Asp	Ile	Phe	Asp	Gly	Ser	Asp	Asp	Glu	Glu	Glu	Ser	Gln
145				150					155					160	
Asp	Ile	Val	Asn	Gln	Val	Leu	Asp	Glu	Ile	Gly	Ile	Glu	Ile	Ser	Gly
			165					170					175		
Lys	Met	Ala	Lys	Ala	Pro	Ser	Ala	Ala	Arg	Ser	Leu	Pro	Ser	Ala	Ser
			180					185					190		
Thr	Ser	Lys	Ala	Thr	Ile	Ser	Asp	Glu	Glu	Ile	Glu	Arg	Gln	Leu	Lys
		195					200					205			
Ala	Leu	Gly	Val	Asp											
															210

<210> 5825

<211> 1940

<212> DNA

<213> Homo sapiens

<400> 5825

ctccgacgat ctctcagtga aggacgtcct taatgaggcc acttagcaca gtcaaggtag
 60

gtgaatcaag ttcttgatga aattggaatt gaaatttctg gaaagatggc caaagctcca
780
tcagctgctc gaagcttacc atctgectct acttcaaagg ctacaatctc agatgaagag
840
attgaacggc aactcaaggc tttaggagta gattagtcaa aagaagtcac actattttgc
900
ttacttataa ttatgtagta taaaccaagc acagtgcaga tttcttttac aaaacacatg
960
tattttgcaa aaaaaaaaa atggagacca tgagtgaaca gttgtttcct aacccatggc
1020
tatttagaat cttttgcaa agaatacaca tgatgcaaaa atgggaacag tttggatttt
1080
aattagaact gtttatgagt gatgatgtgt aaaaagttga cttctctttt gcatggcaca
1140
gagaaattat attccttact tcatgtcagt ttatgttcta aatctttttc actgaatata
1200
aaaatcttgt taaatgccat taggcaccaa cttaaagagg gttgtaaaaa tattaaaagt
1260
atategttaa ttctgtatct gttgcttgct ttttgtaagt gattatgtgt tatgaccata
1320
ggtggttaca gctgccaaat tatttttaaa tgggtcaaaa gaagagtgtt atttaaacat
1380
ctgtcttaaa caaaaactgt cataactttt cttttttttt tttccattag gagaacattc
1440
tagttggtaa atttcaaaat gtgcttgaca cctgccttaa atagcacaga cctattgtgc
1500
acattcttaa attatttcag ctggcagaaa agaattacat ttaaaactga aatcaaggcc
1560
tcaatacaaa gattatcctg gctcttttct atctctgtgg gcctaattga aatatgtact
1620
cttattttag acacgcctct gttaaaacag gtgttttaac atgttaaaac agaccagggt
1680
ttcctggtct cagacctatg atgacttgct cttttgatgt cactactgtg aattgaatat
1740
aattagtaaa aatagacgat gaataaataa cactttatag taagaaaaca atatattttg
1800
gccatctaaa aatgagaatt ataattatat gaattataat ttaaactggt taattttggt
1860
taatgtgtat attgaatctt ccaaattgaa gccattatc tcaattaagt actacaacta
1920
tgacaatgct tgacctacat ttctaaaata aaaattcaca ttttttgata aataaactac
1980
agttttacca gaaattacta tctaaatgtg tatttagcagt attttttaag gtgaaattgc
2040
cttggtatct aatgaatgtg tagacagga gataaaatga aggattgcc gactagttag
2100
aatagaattt aggattaggt tagttttgaa aaatgatgtt gtaatatatg ggttctaaca
2160
catcctacca taaaaactgg aggagatatg tgtaacctgg ttaatttggg atgggtggaca
2220
ttttgggcta atactgacaa aatacatctt aggactagta tacatgtgac acggattgtc
2280
aggaggaatg aaaaactaaa ctgtatagtt tatattccgt aaaccatttt ataatgttca
2340

530	535	540
Ser Ala Met Arg Thr Glu Pro Thr Arg Glu Ser Asn Arg Lys Thr Asp		
545	550	555
Ser Arg Leu Val Asp Val Ser Pro Asp Arg Gly Ser Pro Pro Ser Arg		560
	565	570
Val Pro Gln Ala Leu Asn Phe Ser Pro Glu Glu Ser Asp Ser Thr Phe		575
	580	585
Ser Lys Ser Thr Ala Thr Glu Val Ala Arg Glu Glu Ala Lys Pro Gly		590
	595	600
Gly Asp Ala Ala Pro Ser Glu Ala Leu Leu Val Asp Ile Lys Leu Glu		605
	610	615
Pro Leu Ala Val Thr Pro Asp Ala Ala Ser Gln Pro Leu Ile Asp Leu		620
625	630	635
Pro Leu Ile Asp Phe Cys Asp Thr Pro Glu Ala His Val Ala Val Gly		640
	645	650
Ser Glu Ser Arg Pro Leu Ile Asp Leu Met Thr Asn Thr Pro Asp Met		655
	660	665
Asn Lys Asn Val Ala Lys Pro Ser Pro Val Val Gly Gln Leu Ile Asp		670
	675	680
Leu Ser Ser Pro Leu Ile Gln Leu Ser Pro Glu Ala Asp Lys Glu Asn		685
	690	695
Val Asp Ser Pro Leu Leu Lys Phe		700
705	710	

<210> 5823

<211> 2585

<212> DNA

<213> Homo sapiens

<400> 5823

```

ngggggttctc caaaaagtgt gttagtcccc ggtcacctga gtcctgggtg acgcggctgc
60
ggtagctgcg gatacaagcc ttccgcgggt cctgcttggc gaccccgacc tctctctgct
120
gtctctccgc tccgccaccc cgaaccgcc aaggctctgt ccttttcttc ctgtcctttg
180
ccagcggttg gccggaccgg gccgagccgg gccgcccggg cgcagtcttt aaccatggcg
240
tccctcttca agaagaaaac cgtggatgat gtaataaagg aacagaatcg agagttacga
300
ggtacacaga gggctataat cagagatcga gcagctttag agaaacaaga aaaacagctg
360
gaattagaaa ttaagaaaat ggccaagatt ggtaataagg aagcttgcaa agtttttagcc
420
aaacaacttg tgcattctacg gaaacagaag acgagaactt ttgctgtaag ttcaaaagtt
480
acttctatgt ctacacaaac aaaagtgatg aattcccaaa tgaagatggc tggagcaatg
540
tctaccacag caaaaacaat gcaggcagtt aacaagaaga tggatccaca aaagacatta
600
caaacaatgc agaatttcca gaaggaaaac atgaaaatgg aaatgactga agaatgatc
660
aatgatacac ttgatgacat ctttgacggt tctgatgacg aagaagaaag ccaggatatt
720

```

4986

aggcctctga tcgacctcat gacaaacact ccagacatga ataaaaatgt ggccaaacct
 2340
 tcaccgggtgg tgggacagct catagacctg agtccccctc tgatccagct gagccctgag
 2400
 gctgacaagg agaacgtgga ttccccactc ctcaagttct aagccgaacc aaatcctttg
 2460
 ccttgaaaga acagccctaa agtgggttttc aaccctcaga aacaagcttt aggtgggtcg
 2520
 cagtggctta cacttgtaac cctagaactt gggagggtga ggtgggcgga ttacttgagc
 2580
 ccaggagttc gggaccagcc tgggaaatat agtgaaactc ctgtccctac aaaaaatata
 2640
 aaaattagcc ggggtgtgga gtgcatgcct gtagtcccag ctacttggga ggctgaagtg
 2700
 ggaggatggc ctgagctcaa ggagatgcag gctgcagtgg gctgtgattg tgccactgca
 2760
 ctccagcctg ggcaccaatg tgagaacctg tcttgaaaa aaaaaaaaag aaacatgttt
 2820
 tagtagaagt tttatttgaa aaagaaaaat aagcataaat atattcccag tgctggagag
 2880
 ggtgggtgta gggactgggg ccagcacgga ccaccaagg cctctgcttc ccgccgccac
 2940
 cctcctcgct gccattctct gggctggaat gtgaagcctc agtcactcta aatgaagaat
 3000
 tttcttttga atgttttgta tgtaaaatag caagtggcta tttttaaaagt taagtttgta
 3060
 taaatagtta gatattctag atttacatta aattgtaaaa taaatggact tattgaagca
 3120
 tatcttgatt ttttaagctta tcttgatttt caaacatgca tagctatttt tatcactcta
 3180
 atcagtaagg ctactatcta gactcgaatg ctttcataca agtgattttc aaaaattagt
 3240
 caatataaat tgatgtcagt gcaggccccg cccgccccca gatacactag tt
 3292

<210> 5822

<211> 712

<212> PRT

<213> Homo sapiens

<400> 5822

Ile	Leu	Leu	Leu	Ala	Asp	Glu	Lys	Phe	Asp	Phe	Asp	Leu	Ser	Leu	Ser
1				5				10						15	
Ser	Ser	Ser	Ala	Asn	Glu	Asp	Asp	Glu	Val	Phe	Phe	Gly	Pro	Phe	Gly
			20					25					30		
His	Lys	Glu	Arg	Cys	Ile	Ala	Ala	Ser	Leu	Glu	Leu	Asn	Asn	Pro	Val
		35					40					45			
Pro	Glu	Gln	Pro	Pro	Leu	Pro	Thr	Ser	Glu	Ser	Pro	Phe	Ala	Trp	Ser
		50				55					60				
Pro	Leu	Ala	Gly	Glu	Lys	Phe	Val	Glu	Val	Tyr	Lys	Glu	Ala	His	Leu
		65			70					75				80	
Leu	Ala	Leu	His	Ile	Glu	Ser	Ser	Ser	Arg	Asn	Gln	Ala	Ala	Gln	Ala
			85					90						95	
Ala	Lys	Pro	Glu	Asp	Pro	Arg	Ser	Gln	Gly	Val	Glu	Arg	Phe	Ile	Gln

ctctttgaga aagaaaagga aatgaagaaa agccccacgt ctcttaaaag ggagacatac
720
tacctgtcag acagcccctt gctggggccc cctgtgggtg agcctcggtt cttggcctcc
780
tccccggccc tgcccagctc tgggtgcccag gccgcctca cccgggcgcc ggggcctccg
840
cactctgctc atgctttgcc cagggaatca tgcactgctc atgctgcaag tcaggcagcg
900
actcagagga agcccgggac caaattgctg ctgcctcgag cggcctctgt tagaggaaga
960
agcatccctg gggctgcgga gaagcccaag aaagagattc cagctagtcc ttccaggaca
1020
aaaatcccag ctgagaagga atcccaccgg gatgttctcc ctgacaaacc tgccccgggt
1080
gctgtcaatg tgccggccgc cggaagccac ttgggccagg gcaagcgggc gatccctgtt
1140
ccaaacaagt tggggctgaa gaagaccctg ttaaaagcac ccggctctac cagcaatctc
1200
gcaaggaagt cctcctcggg gcctgttttg agcggggcat ccagtgcgtg cacatcccca
1260
gcagtgggca aagctaaatc aagtgaattt gcaagtattc ctgcaaatac ctccccggct
1320
ctgtcaaaca tcagcaagtc aggcagaatg ggaccgcga tgctgcggcc agctctgcct
1380
gcaggccctg tgggggcac ctcctggcag gccaaagcgg tgatgtttc tgagctggca
1440
gcggagcagc tcacggcacc cccctcagca tccccaccc aaccccagac tccggaaggt
1500
ggcggccagt ggctgaactc cagttgcgtt tggtcagaat cttctcaatt gaataagact
1560
agaagtatca gacggcgaga ttctgtcta aattccaaga caaagggtat gcctactcct
1620
acaaatcaat ttaaaattcc taagttttct attggtgact ccccgacag ctcaacacca
1680
aagctttcgc gggcacagcg gccgcagtcg tgcacgtcag ttggcagggc cactgtccac
1740
agcaccgccg ttagacgctc atctgggcca gcaccacaaa gcctgctgag cgcattggct
1800
gtgtcagcct tgcccacacc cgcagcccg cgctgctctg gccttcacc gatgaccccc
1860
aaaacgatgc ccagggccgt gggctctccc ctgtgtgtg cagctcggag acgttcctct
1920
gagccccgca agaactctgc aatgagaact gaaccaacaa gggagagcaa cagaaagaca
1980
gattccaggc tgggtgatgt gtcccctgac aggggttctc ctcttcccg tgtgcctcag
2040
gcacttaact tttctccaga ggaaagcgat tctactttct ccaaaagtac tgccacagaa
2100
gtagctcggg aggaagccaa gccgggtgga gatgcagccc ctagtgaggc tcttcttgta
2160
gatatcaaac tggaaccact cgcggctact ccagatgctg caagccagcc cctcattgac
2220
cttctctca tcgacttctg cgatacccca gaagcacacg tggctgtagg atctgaaagc
2280

	85		90		95										
Trp	Ile	Glu	His	Ser	Lys	Leu	Arg	Glu	Ile	Asn	Phe	Lys	Ile	Val	Glu
		100						105					110		
Phe	Asn	Pro	Met	Val	Leu	Lys	Gly	Lys	Ile	Arg	Pro	Asp	Ser	Ser	Arg
		115					120					125			
Pro	Glu	Leu	Leu	Gln	Pro	Leu	Asn	Phe	Val	Arg	Phe	Tyr	Leu	Pro	Leu
	130					135					140				
Leu	Ile	His	Gln	His	Glu	Lys	Val	Ile	Tyr	Leu	Asp	Asp	Asp	Val	Ile
145					150					155				160	
Val	Gln	Gly	Asp	Ile	Gln	Glu	Leu	Tyr	Asp	Thr	Thr	Leu	Ala	Leu	Gly
			165						170					175	
His	Ala	Ala	Ala	Phe	Ser	Asp	Asp	Cys	Asp	Leu	Pro	Ser	Ala	Gln	Asp
		180						185				190			
Ile	Asn	Arg	Leu	Val	Gly	Leu	Gln	Asn	Thr	Tyr	Met	Gly	Tyr	Leu	Asp
	195						200					205			
Tyr	Arg	Lys	Lys	Ala	Ile	Lys	Asp	Leu	Gly	Ile	Ser	Pro	Ser	Thr	Cys
	210					215					220				
Ser	Phe	Asn	Pro	Gly	Val	Ile	Val	Ala	Asn	Met	Thr	Glu	Trp	Lys	His
225					230					235				240	
Gln	Arg	Ile	Thr	Lys	Gln	Leu	Glu	Lys	Trp	Met	Gln	Lys	Asn	Val	Glu
			245						250					255	
Tyr	Val	Lys	Ala	Ser	Leu	Pro	Phe	Phe	Pro	Cys	Leu	Glu	Thr	Lys	Ser
		260						265					270		
Phe	Asn														

<210> 5821

<211> 3292

<212> DNA

<213> Homo sapiens

<400> 5821

ngcctgtaac cccaacactt tgggaggcca cgccaggagg atcacttgag gccaggagtt
60

cgagaccagc ctggtcaaca tagcgagact tcgtcactag aaaaaattta aaaaattttt
120

taaaaaggaa aaaatataac ttagagcccc ctatgaaaaa ctaaattagc atcatgacag
180

gatacacttt ggggagttaa atttcacagt acctttatct aattccaagc catagagcct
240

ggtaatatct ttctctttat cagctgtggc actaaaataa cagtggattt ttccctcta
300

gacattcttc ttttggccga tgaaaaattt gacttcgac tttcattgtc ttcttcgagt
360

gcaaatgaag atgatgaagt cttcttcgga ccctttggac ataaagaaag atgtattgct
420

gccagcttgg aattaaataa tccgggtccc gaacagcctc cgttgccac atctgagagt
480

ccctttgcct ggagccctct ggccggggag aagttcgtgg aggtgtacaa agaagctcac
540

ttactggctt tacacattga gagcagcagc cggaaccagg cagcccaagc tgccaagcct
600

gaagaccctc ggagccaggg cgtggaaaga ttcatacagg agtcaaaatt aaaaataaac
660

ggactccgga atactctgac tcgaatacga aaatggattg aacattccaa actgagagaa
 660
 ataaacttta aaatcgtgga attcaaccgg atggctctca aagggaagat cagaccagac
 720
 tcatcgaggc ctgaattgct ccagcctctg aactttgttc gattttatct ccctctactt
 780
 atccaccaac acgagaaagt catctatttg gacgatgatg taattgtaca aggtgatatc
 840
 caagaactgt atgacaccac cttggccctg ggccacgcgg cggctttctc agatgactgc
 900
 gatttgcctt ctgctcagga cataaacaga ctctgtgggac ttcagaacac atatatgggc
 960
 tatctggact accggaagaa ggccatcaag gaccttggca tcagccccag cacctgctct
 1020
 ttcaatcctg gtgtgattgt tgccaacatg acagaatgga agcaccagcg catcaccaag
 1080
 caattggaga aatggatgca aaagaatgtg gagtacgtga aggcttctct accatttttt
 1140
 ccatgcttgg aaacaaaatc attcaattaa tttccacac atagttcaag ggtagaaat
 1200
 atttcacagt catctcaggt cagattttct tacagaggca atgttaagaa agaaaagggg
 1260
 gcagtcaatt aaaacctttc ctcaaaagat ataaatcaga ggaatcaaga tcctgtggag
 1320
 cgaggagtcc ctgattatac attttcctag taagctgttg aaaaatgtga cttgaatctt
 1380
 ttccaccaa caatcttcat ttatcttagt tgagtttccc ctctaacaat agattttttt
 1440
 attaaggatt attatataaa gtcaattttg ctttttaagg tttattttta taatttataa
 1500
 tttttcgta tcggagtttt aaaatagaga agataaaaat aagtctaata caagcactat
 1560
 tatcccatca ttgtattgcc tagcagtctt gtgtatctgg atattttaat accatcataa
 1620
 ccttgaattt gcaagtaaag ttattctaaa ta
 1652

<210> 5820

<211> 274

<212> PRT

<213> Homo sapiens

<400> 5820

Met	Ala	Leu	Leu	Arg	Lys	Ile	Asn	Gln	Val	Leu	Leu	Phe	Leu	Leu	Ile
1			5					10					15		
Val	Thr	Leu	Cys	Val	Ile	Leu	Tyr	Lys	Lys	Val	His	Lys	Gly	Thr	Val
		20					25					30			
Pro	Lys	Asn	Asp	Ala	Asp	Asp	Glu	Ser	Glu	Thr	Pro	Glu	Glu	Leu	Glu
		35				40					45				
Glu	Glu	Ile	Pro	Val	Val	Ile	Cys	Ala	Ala	Ala	Gly	Arg	Met	Gly	Ala
	50				55				60						
Thr	Met	Ala	Ala	Ile	Asn	Ser	Ile	Tyr	Ser	Asn	Pro	Asp	Ala	Asn	Ile
65				70				75			80				
Leu	Phe	Tyr	Val	Val	Gly	Leu	Arg	Asn	Thr	Leu	Thr	Arg	Ile	Arg	Lys

<213> Homo sapiens

<400> 5818

```

Met Gly Gln Leu Gln Asn Lys Glu Asn Asn Asn Thr Lys Asp Ser Pro
 1             5             10             15
Ser Arg Gln Cys Ser Trp Asp Lys Ser Glu Ser Pro Gln Arg Ser Ser
           20           25           30
Met Asn Asn Gly Ser Pro Thr Ala Leu Ser Gly Ser Lys Thr Asn Ser
      35             40             45
Pro Lys Asn Ser Val His Lys Leu Asp Val Ser Arg Ser Pro Pro Leu
 50             55             60
Met Val Lys Lys Asn Pro Ala Phe Asn Lys Gly Ser Gly Ile Val Thr
65             70             75             80
Asn Gly Ser Phe Ser Ser Ser Asn Ala Glu Gly Leu Glu Lys Thr Gln
           85           90           95
Thr Thr Pro Asn Gly Ser Leu Gln Ala Arg Arg Ser Ser Ser Leu Lys
      100           105           110
Val Ser Gly Thr Lys Met Gly Thr His Ser Val Gln Asn Gly Thr Val
      115           120           125
Arg Met Gly Ile Leu Asn Ser Asp Thr Leu Gly Asn Pro Thr Asn Val
      130           135           140
Arg Asn Met Ser Trp Leu Pro Asn Gly Tyr Val Thr Leu Arg Asp Asn
      145           150           155           160
Lys Gln Lys Glu Gln Ala Gly Glu Leu Gly Gln His Asn Arg Leu Ser
           165           170           175
Pro Met Ile Met Ser Ile Thr Val Leu His Asp Glu Leu Asp Asp
      180           185           190

```

<210> 5819

<211> 1652

<212> DNA

<213> Homo sapiens

<400> 5819

```

gatattcttt tggaaacgta atattggcct tggggctctc cagccctttg ggacttccaa
60
tgggatctta gaagcagccg aagcagcgtg agggcggccg agggccagcc acgatttgaa
120
cgctctgcct tgcagctctt ctggaccgag gagcccaaag ccctaccctc accattccac
180
aggctcctgtg ggaagagcag cgtggagggtg ggctgagggtt agaagggtgca gagcgtggaa
240
gaagattgtg agctgagtat tggacatctg ttcttgaata gtccctgggc ctgccatagg
300
aaaggaagtt ctccagggtt acagttctta tccgcgtgaa tacacatggc tctgttacga
360
aaaattaatc aggtgctgct gttccttctg atcgtgaccc tctgtgtgat tctgtataag
420
aaagttcata aggggactgt gcccaagaat gacgcagatg atgaatccga gactcctgaa
480
gaactggaag aagagattcc tgtggtgatt tgtgctgcag caggaggat ggggtgccact
540
atggctgcca tcaatagcat ctacagcaac cctgacgcca acatcttggt ctatgtagtg
600

```

```

      35          40          45
Thr Arg Tyr His Val Leu Val Asn Leu Gly Leu Pro Ser Leu Phe Ser
      50          55          60
Phe Gly Leu Val Asp Asp Ala His His Leu Ile Asn Ala Leu Arg Gln
      65          70          75          80
Gln Ser Ile Thr Leu His Leu Val Asp Val Met Pro Val Leu Ile Thr
      85          90          95
Leu Ser Ser Leu Gly Ser Ser Phe Leu Leu His Leu Arg Phe Gly Pro
      100          105          110
Leu Ser Leu Val Ser His Thr Gly Ala Leu Gln Leu Pro Asn Lys Gly
      115          120          125
Gln His Leu Ser Cys Gly Phe Ile Pro Ala Gly Pro Val Asn Glu Arg
      130          135          140
Thr Val Ser Leu Glu His Lys Ile Arg Val Arg Leu Val Leu Val Leu
      145          150          155          160
Gln Thr Thr Gly Gly Tyr Ile Arg His Gly Arg Gly Cys Ser Glu Ala
      165          170          175
Ser Asp His His Ala Ser Ile Pro Gln Ala Ala Asn Gly Arg Arg Ser
      180          185          190
Leu Leu Leu Ala
      195

```

<210> 5817

<211> 648

<212> DNA

<213> Homo sapiens

<400> 5817

```

cccaaagatg cagaactaca aagcaagccc caagatggag tgagcaacaa caatgaaatt
60
cagaagaaag ccaccatggg gcagttacag aacaaggaga acaataacac caaggacagc
120
cctagtaggc agtgcctctg ggacaagtct gagtcacccc agagaagcag catgaacaat
180
ggatccccca cagctctatc aggcagcaaa accaacagcc caaagaacag tggtcacaag
240
ctagatgtgt ctagaagccc ccctctcatg gtcaaaaaga acccagcctt taataagggg
300
agtgggatag ttaccaatgg gtccttcagc agcagtaatg cagaaggtct tgagaaaacc
360
caaaccaccc ccaatgggag cctacaggcc agaaggagct cttcactgaa ggtatctggt
420
accaaaatgg gcacgcacag tgtacagaat ggaacgggtgc gcatgggcat tttgaacagc
480
gacacactcg ggaacccccc aaatgttcga aacatgagct ggctgccaaa tggctatgtg
540
accctgaggg ataacaagca gaaagaacaa gctggagagt taggccagca caacagactg
600
tcacctatga taatgtccat cacagttctc catgatgaac ttgatgac
648

```

<210> 5818

<211> 191

<212> PRT

35 40 45
 Gln Thr Arg Ala Ile Tyr Asp Ile Tyr Gly Lys Arg Gly Leu Glu Met
 50 55 60
 Glu Gly Trp Glu Val Val Glu Arg Arg Arg Thr Pro Ala Glu Ile Arg
 65 70 75 80
 Glu Glu Phe Glu Arg Leu Gln Arg Glu Arg Glu Arg Arg Leu Gln
 85 90 95
 Gln Arg Thr Asn Pro Lys Leu Cys Asp Asn Lys Leu Cys Ser Ala Val
 100 105 110
 Phe Ile Pro Trp Asn Pro Thr Arg Pro Asp His Cys Pro Ser Ser Glu
 115 120 125
 Pro Arg Gln Glu His Arg Gly Leu Pro Ala Val Ala Met Gly Tyr Pro
 130 135 140
 Val Ser His Glu His
 145

<210> 5815
 <211> 590
 <212> DNA
 <213> Homo sapiens

<400> 5815
 ttcatccagg ctgctcttgg ggatcagcca cgtgatatcc tttgtggggc agctgatgaa
 60
 gttctagctg ttctaaagaa tgaaaagctg cgggacaagg aaaggcgaaa ggagattgac
 120
 ctgctgctgg gtcaaacaga tgataccaga taccatgtgc tagtgaacct gggcctcccg
 180
 agtctcttta gttttgggct tgtagatgat gccaccatc tcatcaatgc cctccgacag
 240
 cagagtataa cccttcatct tgttgatgtc atgccggtcc tcatcacgct ttcttcgctt
 300
 ggctcttctt tectctgca tctgcggtt ggtccgttga gccttgcttc ccatacgggt
 360
 gccctccagc ttcccaacaa gggacagcac ctctcctgtg gggttcatccc ggcggtccg
 420
 gtcaatgaga gaacggtcag cttggagcac aagattcgag ttgccttgt actcgtattg
 480
 cagactacgg gcggttacat ccgccatggc cgcggctgct cggaggcttc agaccaccac
 540
 gcctccatac cgcaagctgc aaacggccgc agatctctgc tctggcgcc
 590

<210> 5816
 <211> 196
 <212> PRT
 <213> Homo sapiens

<400> 5816
 Phe Ile Gln Ala Ala Leu Gly Asp Gln Pro Arg Asp Ile Leu Cys Gly
 1 5 10 15
 Ala Ala Asp Glu Val Leu Ala Val Leu Lys Asn Glu Lys Leu Arg Asp
 20 25 30
 Lys Glu Arg Arg Lys Glu Ile Asp Leu Leu Leu Gly Gln Thr Asp Asp

gagggaaagg ctctggccct gactccgctg tgtcccagac acacgtgctg accgcagccc
 1800
 gccgccctgt agttcttggc tgggtctgga ggtgtctgtg gagcaccctg ccctcaccac
 1860
 aggagcgtga gccacttctg cagtccacgc tgaacatggg aaacaacctg aaaagcaggc
 1920
 aggcctcccg gtcaggagac ctctgctgtg ctggcttccc atgaccacct cctcttgctg
 1980
 aaatattact gcttgaatct ggagcagatt gcgggtttat aaaactgctt tttatctgag
 2040
 aacaaacggg tttggaaatt agtcgtcttt tttccccact ccagagctg ctcaagtcac
 2100
 tccaccggcc ccctcggtt gggacagggt agtgtaaact ccgatcccag ggcctagccc
 2160
 tgacacaggt ggcttcccg atcccgggtg gaaaacgccc tgccaccagc gggcttgagc
 2220
 tggcctgtgt ccctccaccg cctgcaccac ccacctccag agtgcagtgc tgggcaaggg
 2280
 cagctcaaga ggacaggacc aggcgcttgg caagacatca gacacacca acccaaaggc
 2340
 gtggaccca ggcccggccc gtggtaccca gcaggtggca ctgcagctcc ccgctcctgc
 2400
 aggtccagcg tcttcacagg aacaccaggg cctgtgctcc ggagccttcc ttcagacct
 2460
 tctccacgt gccacttgg gatgcagaat gcagcggagc taggaccccc tccacggcct
 2520
 ggacctcgcc tgcagtaaag ttacgtgagg cctgtctctc ggggcctgga agtggcagcc
 2580
 atcagttgct cttgtgacc cctcgagca agcgcgcac aggtggtggc tgagacagct
 2640
 ggcgcggggg gccccaagct gcgcggcct ccagcccacc cacagctggt gctgaagtca
 2700
 ggctccctc cccagcactg gtatctgagt aacggctaag aacctcctc ctctggtttt
 2760
 gaaaagcagt tcgggttgct caattctgta acattcatct ccatttttta aaaaggttcc
 2820
 tctgacggcc ccacggcccg agccgcggtg agcgtcgtgt tgcattgagc tgggccccgg
 2880
 gcttcccgtg cgcctctgcc gcaggtgctt ctgggcaccc atcctctgag tttcatttgc
 2940
 agtcgactgt acagaaggca ctcaccacaa taaaccttcc ctgaaagcag a
 2991

<210> 5814

<211> 149

<212> PRT

<213> Homo sapiens

<400> 5814

Ala Ser Ser Glu Glu Leu Lys Ala Ala Tyr Arg Arg Leu Cys Met Leu

1

5

10

15

Tyr His Pro Asp Lys His Arg Asp Pro Glu Leu Lys Ser Gln Ala Glu

20

25

30

Arg Leu Phe Asn Leu Val His Gln Ala Tyr Glu Val Leu Ser Asp Pro

ttccccatttc aaggctgatt ctgatgatga taatgtttta gtagcattga ttgttctcta
180
attgaatttt tctttcttta ggcttcttct gaagagctga aagctgccta ccggaggctc
240
tgtatgctct accatccaga caagcacaga gaccagagc tcaagtcaca ggcggaacga
300
ctgtttaacc ttgttcacca ggcttatgaa gtgcttagtg acccccaaac cagggccatc
360
tatgatatat atgggaagag aggactggaa atggaaggat gggagggtgt ggaaaggagg
420
agaacccctg ctgaaattcg agaggagttt gagcggctgc agagagagag agaagagagg
480
agattgcagc agcgaaccaa tccaagctt tgtgacaaca aactgtgctc tgcagttttc
540
atcccggtga atccgacccg gcctgaccac tgtcctagct cggaacctag acaagaacac
600
cgtgggttac ctgcagtggc gatggggtat ccagtcagcc atgaacacta gcatcgtccg
660
agacactaaa accagccact tcaactgtggc cctgcagctg ggaatccctc actcctttgc
720
actgatcagc tatcagcaca aattccaaga tgacgatcag actcgtgtga aaggatccct
780
gcagagcagg cttctttggg acggtggtgg agtacggagc tgagaggaag atctccaggc
840
acagcgtttt ggggtgcagct gtcagcgttg gagttccaca gggcgtttct ctcaaagtca
900
agctcaacag ggccagtcag acatacttct tccctattca cttgacggac cagcttctgc
960
ccagcgcctat gttctatgcc accgtggggc ctctagtggc ctactttgcc atgcaccgtc
1020
tgatcatcaa accatacctc agggctcaga aagagaagga attggagaag cagagggaaa
1080
gcgcccacc cgatgtgctg cagaagaagc aagaggcgga gtccgctgtc cggctgatgc
1140
aggaatctgt ccgaaggata attgaggcag aagagtcag aatgggcctc atcatcgtca
1200
atgcctggta cgggaagttt gtcaatgaca agagcaggaa gagcgagaag gtgaagggtga
1260
ttgacgtgac tgtgcccctg cagtgcctgg tgaaggactc gaagctcatc ctacaggagg
1320
cctccaaggc tgggctgcct ggcttttatg acccggtgtg gggggaagag aagaacctga
1380
aagtgtctta tcagttccgg ggcgtcctgc atcaggtgat ggtgctggac agtgaggccc
1440
tccggatacc aaagcagtc caccagatcg atacagatgg ataaactgcc aagaaccaga
1500
tttttaaaag gccgcaaaaa atcttttctt gggagtctac aaatttgga atgaaaaaac
1560
ccagacatca gatgttttta ttttatatta ttattataga aggtggtacc attatcaatt
1620
atgtgaaggg acatgcagac accccagctt ttgaggggtc tgggggtagg actgaggcag
1680
ccccactggg aaccagactg cagcctggcc catggctgtt ttcccaagga tcagttcctg
1740

115	120	125
Ala Leu Pro Pro Lys Arg Met	Leu Gly Ala Asp Arg Glu Phe Ile Glu	
130	135	140
Ala Arg Arg Arg Ala Leu Lys Arg Phe Val Asn Leu Val Ala Arg His		
145	150	155
Pro Leu Phe Ser Glu Asp Val Val Leu Lys Leu Phe Leu Ser Phe Ser		
165	170	175
Gly Ser Asp Val Gln Asn Lys Leu Lys Glu Ser Ala Gln Cys Val Gly		
180	185	190
Asp Glu Phe Leu Asn Cys Lys Leu Ala Thr Arg Ala Lys Asp Phe Leu		
195	200	205
Pro Ala Asp Ile Gln Ala Gln Phe Ala Ile Ser Arg Glu Leu Ile Arg		
210	215	220
Asn Ile Tyr Asn Ser Phe His Lys Leu Arg Asp Arg Ala Glu Arg Ile		
225	230	235
Ala Ser Arg Ala Ile Asp Asn Ala Ala Asp Leu Leu Ile Phe Gly Lys		
245	250	255
Glu Leu Ser Ala Ile Gly Ser Asp Thr Thr Pro Leu Pro Ser Trp Ala		
260	265	270
Ala Leu Asn Ser Ser Thr Trp Gly Ser Leu Lys Gln Ala Leu Lys Gly		
275	280	285
Leu Ser Val Glu Phe Ala Leu Leu Ala Asp Lys Ala Ala Gln Gln Gly		
290	295	300
Lys Gln Glu Glu Asn Asp Val Val Glu Lys Leu Asn Leu Phe Leu Asp		
305	310	315
Leu Leu Gln Ser Tyr Lys Asp Leu Cys Glu Arg His Glu Lys Gly Val		
325	330	335
Leu His Lys His Gln Arg Ala Leu His Lys Tyr Ser Leu Met Lys Arg		
340	345	350
Gln Met Met Ser Ala Thr Ala Gln Asn Arg Glu Pro Glu Ser Val Glu		
355	360	365
Gln Leu Glu Ser Arg Ile Val Glu Gln Glu Asn Ala Ile Gln Thr Met		
370	375	380
Glu Leu Arg Asn Tyr Phe Ser Leu Tyr Cys Leu His Gln Glu Thr Gln		
385	390	395
Leu Ile His Val Tyr Leu Pro Leu Thr Ser His Ile Leu Arg Ala Phe		
405	410	415
Val Asn Ser Gln Ile Gln Gly His Lys Glu Met Ser Lys Val Trp Asn		
420	425	430
Asp Leu Arg Pro Lys Leu Ser Cys Leu Phe Ala Gly Pro His Ser Thr		
435	440	445
Leu Thr Pro Pro Cys Ser Pro Glu Asp Gly Leu Cys Pro His		
450	455	460

<210> 5813

<211> 2991

<212> DNA

<213> Homo sapiens

<400> 5813

nttgatgtat gtaattgatc actttattaa ctggcaaaaa gaagccttgt tgaggtgata
60
aaccgaactt cattacatcc tgtatgtcga gagcaaacac attgggacgt ggctgatggg
120

```
<210> 5812
<211> 463
<212> PRT
<213> Homo sapiens
```

```

<400> 5812
Trp Trp Cys Trp Leu Asp Val Gly Gly Phe Thr Gly Pro Ala Val Ser
 1          5          10          15
Glu Arg Ser His Ala Val Ile Arg Ser Leu Glu Ala Ala Asp Leu Pro
          20          25          30
Thr Pro Gln Ala Ile Glu Pro Gln Ala Ile Val Gln Gln Val Pro Ala
          35          40          45
Pro Ser Arg Met Gln Met Pro Gln Gly Asn Pro Leu Leu Leu Ser His
          50          55          60
Thr Leu Gln Glu Leu Leu Ala Arg Asp Thr Val Gln Val Glu Leu Ile
65          70          75          80
Pro Glu Lys Lys Gly Leu Phe Leu Lys His Val Glu Tyr Glu Val Ser
          85          90          95
Ser Gln Arg Phe Lys Ser Ser Val Tyr Arg Arg Tyr Asn Asp Phe Val
          100          105          110
Val Phe Gln Glu Met Leu Leu His Lys Phe Pro Tyr Arg Met Val Pro

```


caagcccagt gtggagacca gaagcctgcg tggggcagga gttcccggcg cagcaaggga
 1800
 cgggacgagg accttgggtcc cggggcgggg cgggcggggc ccttatctct cagaacactc
 1860
 acaggcaacg cccaggactc cagaatcttc tgccctgggc agggagggcc tgcttgatc
 1920
 cttccccctt ccatcggggg ccacagagca caccctgga gaagcaggag cgggccctgg
 1980
 gcctcctcag cttggccacg gagttgctg
 2009

<210> 5810

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5810

Xaa	Phe	Phe	Phe	Phe	Phe	Lys	Met	Glu	Ser	Arg	Ser	Ile	Thr	Gln	Ala
1				5					10					15	
Gly	Gly	Gln	Trp	Arg	Asp	Leu	Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gly
		20					25				30				
Phe	Lys	Gln	Phe	Ser	Cys	Leu	Ser	Leu	Leu	Ser	Ser	Trp	His	Tyr	Lys
		35				40						45			
His	Pro	Thr	Pro												
		50													

<210> 5811

<211> 1607

<212> DNA

<213> Homo sapiens

<400> 5811

gtagcaaga aagtgatgtg ttccgggtag gggaattctg ttttggtatt attttgtctt
 60
 tcctgagaaa agcatcacia aaagagatgt ttgcccatcc tgtttgctgg gtagtgagg
 120
 agagaccggg ggtgatggtg gtgctggctg gacgtgggtg gtttcacagg acctgctgtg
 180
 tctgagagga gccatgcggt gattagaagc ttggaggctg cagatctgcc gacacccag
 240
 gccatcgagc cccaggccat cgtgcagcag gtcccagccc ccagtcgaat gcagatgccg
 300
 caggggaacc cgctgctgct gtcccacacc ctgcaggagc tgctggccag ggacaccgtg
 360
 caggtggagc tcattccgga gaagaaggc ctcttcctga agcatgtgga gtatgaggtt
 420
 tccagccagc gcttcaagtc ctcggtatac agacggtaca atgacttcgt ggtcttccag
 480
 gagatgctcc tgcacaagtt cccctaccgt atggtgcctg ccctgccacc caagagaatg
 540
 ctgggagctg acaggaggt catcgaggcc aggaggagag ccctgaagcg cttcgtcaac
 600
 ctgggtggcg gacacccct gttctccgag gatgtggtcc tcaagctctt cctgtccttc
 660

ctcctgagta gttggcacta taagcatcca acaccatgac cggctaattt ttgtgttttt
180
ggtagaagcg gggtttcacc atgttgcca ggctggtctc aaactcctga cctcaggtga
240
tccaccacc tgcctctccc aaagtgtctg tattacaggc gtgagccacc gagcccaacc
300
tgagtcacga ttctctcggc taacaggagg gccccccagg gaaagagggc gggcgggcgg
360
tctgcggaag ggcattgggt ctgaccaccg cacactctgg ccgccctccc gagtctccag
420
aactcctacg cctccttccc agcgggcaca ggccagcccg gctgaccctt ccccggaag
480
caggaggagc cctgcagaaa tcccaggagg gaagtggggc ctggaacggc ctccctgcct
540
ctacgtcag gcggggaagc ctagtgcag agtgccgtgc caggaggtcc gggccacgtc
600
ccctgcacct cccgcagct gctcccagga cgggcagagg cttcggctgt ccacacctc
660
tgggtgaacg ctggggactt gcctggcgt gtgctgcac tgaccatgcc aaggccacg
720
tctgcacatc tgtgcacagc agagggaccg caccaggcca ggcactcacc tccagatccc
780
ggccccagga atgtggatga agagaggctg ctgtgcgact cagtgaagtg ggtgccctcg
840
ctgaaggtct aggggagatg ggggtgggat gagaggtgt ggggcttcac agggccccc
900
tccaccgcg attacagctg gagaggcagg actcaaacc atgtcccca gtccaaacc
960
ctggaaggtt ggccccctt ctcagcctca gtttccccc acccctcgcc cccaactctg
1020
gggacaggaa actcagggtc tcaggcctca cggggactcc taccggctg ggggtcaaagg
1080
aggagctgt ctggctgccg ctgcccagg agcctgagct gggccggtcc tcaagacctg
1140
caggcaggac agagagagtt atgggtcacc ctcacgctg cccagctcta aaagcttcg
1200
ttcatcatct caggggcaaa cctcagtga cccggggggc ttgtggaacc cttcctaacc
1260
cagcctcacc cagcccgact catgaggaca ccagtcagca gctaacacc agacacctg
1320
ggactcggag cacttacagc tcataaaact taaattaact cttccgtcgg ctctctgctg
1380
gccaaactct acccaccac taaagccca gctttcatac cctccttggg caaagacctc
1440
actctcacgc cgagcctct ccccatcagc cccaagtccc tccctctggc ccagccctga
1500
ctatgtggac tgggtgtct gtgtcagatg cagactcttc tgaccctgtg agaaaggctc
1560
atgacagcat gaggggtgtg aagctaacc atgagctctg gggaggccca ggtctccct
1620
gtccccacct gccagtgtg gaagtggggc cgccctttgc tgaagcagca gcagaggctc
1680
acccatcggg caggaggctg gcagccctg aggggtggagc cgaatctcat caccaggaa
1740

gatgctctgc aggaaaataa aagtcagcct ttttctacaa aaaaaaaaaa
1429

<210> 5808

<211> 261

<212> PRT

<213> Homo sapiens

<400> 5808

Ala Pro Ala Leu Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe Ile Leu
1 5 10 15
Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser Leu Arg Pro
20 25 30
Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp Ala Arg Gln Gly
35 40 45
Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu Ala Pro Leu Ala Trp
50 55 60
Asp Leu Gly Leu Leu Leu Phe Val Gly Gln His Ser Leu Met Ala
65 70 75 80
Ala Glu Arg Val Lys Ala Trp Thr Ser Arg Tyr Phe Gly Val Leu Gln
85 90 95
Arg Ser Leu Tyr Val Ala Cys Thr Ala Leu Ala Leu Gln Leu Val Met
100 105 110
Arg Tyr Trp Glu Pro Ile Pro Lys Gly Pro Val Leu Trp Glu Ala Arg
115 120 125
Ala Glu Pro Trp Ala Thr Trp Val Pro Leu Leu Cys Phe Val Leu His
130 135 140
Val Ile Ser Trp Leu Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr
145 150 155 160
Ala Glu Leu Met Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu
165 170 175
Gly Glu Pro Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser
180 185 190
His Leu Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val
195 200 205
Val Pro Thr Leu Gly Thr Asp Arg Leu Leu Leu Ala Phe Leu Leu Thr
210 215 220
Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg Tyr
225 230 235 240
Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg Pro Gln
245 250 255
Asp Gly Glu Ala Glu
260

<210> 5809

<211> 2009

<212> DNA

<213> Homo sapiens

<400> 5809

nttttttttt ttttttttaa gatggaatct cgctccatca cccaggctgg agggcaatgg
60
cgtgatctcg gctcactgca gcctccacct cctgggttca agcaattctc ctgcctcagc
120

100

105

<210> 5807

<211> 1429

<212> DNA

<213> Homo sapiens

<400> 5807

accctccat ttctcgccat ggccctgca ctgctcctga tccctgctgc cctcgccctt

60

ttcatcctgg cctttggcac cggagtggag ttctgctgct ttacctccct tcggccactt

120

cttggaggga tcccggagtc tgggtggccg gatgcccgcc agggatggct ggctgccctg

180

caggaccgca gcctccttgc cccctggca tgggatctgg ggctcctgct tctatttgtt

240

gggcagcaca gcctcatggc agctgaaaga gtgaaggcat ggacatcccg gtactttggg

300

gtccttcaga ggtcactgta tgtggcctgc actgccctgg ccttgcagct ggtgatgcgg

360

tactgggagc ccataccaa aggcctgtg ttgtgggagg ctcgggctga gccatgggccc

420

acctgggtgc cgtcctctg ctttgtgctc catgtcatct cctggctcct catcttttagc

480

atccttctcg tctttgacta tgctgagctc atgggcctca aacaggata ctaccatgtg

540

ctggggctgg gcgagcctct ggccctgaag tctccccggg ctctcagact cttctccac

600

ctgcgccacc cagtgtgtgt ggagctgctg acagtgtgtt ggggtgtgct taccctgggc

660

acggaccgtc tctccttgc ttctcctctt acctctacc tgggcctggc tcacgggctt

720

gatcagcaag acctccgcta cctccgggcc cagctacaaa gaaaactcca cctgctctct

780

cggccccagg atggggaggc agagttagga gctcactctg gttacaagcc ctgttcttcc

840

tctccactg aattctaaat ccttaacatc caggccctgg ctgcttcatg ccagaggccc

900

aatccatgg actgaaggag atgcccctt tactacttga gactttattc tctgggtcca

960

gtccataacc ctaaattctg agtttcagcc actgaactcc aaggtccact tctcaccagc

1020

aaggaagagt ggggtatgga agtcatctgt cccttactg tttagagcat gacactctcc

1080

ccctcaacag cctcctgaga aggaaaggat ctgccctgac cactccccctg gcactgttac

1140

ttgctctgca gcctcagggg tccccttctg caccgctggc ttccactcca agaagggtga

1200

ccagggtctg caagttcaac ggtcatagct gtccctccag gccccaacct tgcctacca

1260

ctccccggcc tagtctctgc acctccttag gccctgctc tgggctcaga ccccaacct

1320

gtcaaggga ttctcctgct cttaactcga tgacttgggg ctccctgctc tcccaggaa

1380

aaggccatcc ttgcgggggc tgaggccgat ctctccatg ggctgagtgc tcagtggaga
180
gcggggagtt gtgtccacct tgccgacgtc gctagccgtg gggctgtcct gggaaggcgg
240
acggcgagcg cccggtgtcc gcaactcggc gcctgccgtg cccgtctgcg cccgtgtcat
300
cctcactcgg gacgcaggga ccgtttttaa atcacagggg cgtgtgtcag cctgccctag
360
gacttcatgt ctatatattt ccccatcac tgccccgact atctgagatc ggccaagatg
420
actgaggtga tgatgaacac ccagcccatg gaggagatcg gcctcagccc ccgcaaggat
480
ggcctttcct accagatcct cccagacccg tcagattttg accgctgctg caaactgaag
540
gaccgtctgc cctccatagt ggtggaaccc acagaagggg aggtggagag cggggagctc
600
cgggtggcccc ctgaggagtt cctggtccag gaggatgagc aagataactg cgaagagaca
660
gcgaaagaaa ataaagagca gtagagtccc tgtggactcc catgggtcat accagccagc
720
atctgttcct gaactgtgtt tttcccatca tgacggaaga agagagttag ccgcaattgt
780
tctgaaaatg tcaaacgagg cttctgtttt gcacctgcag atcaccgagt tggttttctt
840
ttcttttctt gccttttttt ttttttgaat tttgccgagc agtggagccc tctgacaatt
900
tgcaaggccc tctgagaaaag gaagctgctt agagccaggg ggttagtggg tgaggggagc
960
gagtgtgtt tttgagatca ttatctgaac tcaggcagcc tagtagaggc agtgggtggg
1020
ttccaatggg tcttgggtgg tgggaggtgg ggcattgtgca aagcaagcaa ggaacatttg
1080
gggtaagaaa acaaacatga ggcaaaaaaa aa
1112

<210> 5806

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5806

Met	Ser	Ile	Tyr	Phe	Pro	Ile	His	Cys	Pro	Asp	Tyr	Leu	Arg	Ser	Ala
1				5					10					15	
Lys	Met	Thr	Glu	Val	Met	Met	Asn	Thr	Gln	Pro	Met	Glu	Glu	Ile	Gly
		20					25						30		
Leu	Ser	Pro	Arg	Lys	Asp	Gly	Leu	Ser	Tyr	Gln	Ile	Phe	Pro	Asp	Pro
	35					40					45				
Ser	Asp	Phe	Asp	Arg	Cys	Cys	Lys	Leu	Lys	Asp	Arg	Leu	Pro	Ser	Ile
	50				55				60						
Val	Val	Glu	Pro	Thr	Glu	Gly	Glu	Val	Glu	Ser	Gly	Glu	Leu	Arg	Trp
65				70				75					80		
Pro	Pro	Glu	Glu	Phe	Leu	Val	Gln	Glu	Asp	Glu	Gln	Asp	Asn	Cys	Glu
				85				90					95		
Glu	Thr	Ala	Lys	Glu	Asn	Lys	Glu	Gln							

ggagtgaatt tggaccaaac tgtaaaggaa tttatcgtat ttctaaagca agatgtccct
 180
 ttaaggacca acctgccacc accattcaga aattataaat atgatgcact aaagattatt
 240
 catcaagcac ataaatcaaa gacaaatgaa cttgtgttga gtttgaaga tgacgaaaga
 300
 ctctgtctga aagaagacag cactctgaaa gcagctggaa tcgccagtga aactgaaatt
 360
 gcattcttct gtgaagaaga ttataggaac tacaaagcta atccccattc atcctggtga
 420
 aaacatctcg agggcttctt ttttcatac ctgtattaag ctctttattc cactgctgag
 480
 tttttgaaat tgacaaacaa atcttaaaaa attaatccca ggctatactc tttgagctaa
 540
 aatctggtta tttctttctc ttcaggctct tcttctcttc tctctttctt tttctttgtt
 600
 gttgtaaaat aatatattat gagaaaaaca tttgatcttt ttaaaggga ataaattgtt
 660
 attaaaaatt aaaaaaaaaa aaaaaaaaaa aa
 692

<210> 5804

<211> 126

<212> PRT

<213> Homo sapiens

<400> 5804

Met	Ala	Pro	Gly	Glu	Val	Thr	Ile	Thr	Val	Arg	Leu	Ile	Arg	Ser	Phe
1				5					10					15	
Glu	His	Arg	Asn	Phe	Lys	Pro	Val	Val	Tyr	His	Gly	Val	Asn	Leu	Asp
			20					25					30		
Gln	Thr	Val	Lys	Glu	Phe	Ile	Val	Phe	Leu	Lys	Gln	Asp	Val	Pro	Leu
		35					40					45			
Arg	Thr	Asn	Leu	Pro	Pro	Pro	Phe	Arg	Asn	Tyr	Lys	Tyr	Asp	Ala	Leu
		50				55					60				
Lys	Ile	Ile	His	Gln	Ala	His	Lys	Ser	Lys	Thr	Asn	Glu	Leu	Val	Leu
65				70					75					80	
Ser	Leu	Glu	Asp	Asp	Glu	Arg	Leu	Leu	Leu	Lys	Glu	Asp	Ser	Thr	Leu
			85						90				95		
Lys	Ala	Ala	Gly	Ile	Ala	Ser	Glu	Thr	Glu	Ile	Ala	Phe	Phe	Cys	Glu
			100					105					110		
Glu	Asp	Tyr	Arg	Asn	Tyr	Lys	Ala	Asn	Pro	Ile	Ser	Ser	Trp		
		115					120					125			

<210> 5805

<211> 1112

<212> DNA

<213> Homo sapiens

<400> 5805

nntccggagc tccccgctct ccacctcccc ttctgtgggt tccaccacta tggagggcag
 60
 acggctcttc agtttgcagc agcgggtcaaa atctgacggg tctgggaaga tctggttagga
 120

```

      1           5           10           15
Ser Gln Pro Tyr Arg Gly Gly Phe His Glu Asp Gln Trp Glu Lys Glu
      20           25           30
Phe Glu Lys Val Pro Leu Phe Met Ser Arg Ala Pro Ser Glu Ile Asp
      35           40           45
Pro Arg Glu Asn Pro Asp Leu Ala Cys Leu Gln Ser Ile Ile Phe Asp
      50           55           60
Glu Glu Arg Ser Pro Glu Glu Gln Ala Lys Thr Tyr Lys Asp Glu Gly
      65           70           75           80
Asn Asp Tyr Phe Lys Glu Lys Asp Tyr Lys Lys Ala Val Ile Ser Tyr
      85           90           95
Thr Glu Gly Leu Lys Lys Lys Cys Ala Asp Pro Asp Leu Asn Ala Val
      100          105          110
Leu Tyr Thr Asn Arg Ala Ala Ala Gln Tyr Tyr Leu Gly Asn Phe Arg
      115          120          125
Ser Ala Leu Asn Asp Val Thr Ala Ala Arg Lys Leu Lys Pro Cys His
      130          135          140
Leu Lys Ala Ile Ile Arg Gly Ala Leu Cys His Leu Glu Leu Lys His
      145          150          155          160
Phe Ala Glu Ala Val Asn Trp Cys Asp Glu Gly Leu Gln Ile Asp Ala
      165          170          175
Lys Glu Lys Lys Leu Leu Glu Met Arg Ala Lys Ala Asp Lys Leu Lys
      180          185          190
Arg Ile Glu Gln Arg Asp Val Arg Lys Ala Asn Leu Lys Glu Lys Lys
      195          200          205
Glu Arg Asn Gln Asn Glu Ala Leu Leu Gln Ala Ile Lys Ala Arg Asn
      210          215          220
Ile Arg Leu Ser Glu Ala Ala Cys Glu Asp Glu Asp Ser Ala Ser Glu
      225          230          235          240
Gly Leu Gly Glu Leu Phe Leu Asp Gly Leu Ser Thr Glu Asn Pro His
      245          250          255
Gly Ala Arg Leu Ser Leu Asp Gly Gln Gly Arg Leu Ser Trp Pro Val
      260          265          270
Leu Phe Leu Tyr Pro Glu Tyr Ala Gln Ser Asp Phe Ile Ser Ala Phe
      275          280          285
His Glu Asp Ser Arg Phe Ile Asp His Leu Met Val Met Phe Gly Glu
      290          295          300
Thr Pro Ser Trp Asp Leu Glu Gln Lys Tyr Cys Leu Ile Ile Trp Arg
      305          310          315          320
Ser Thr Leu Arg Met Arg Thr Gly Gln Asn Tyr Thr Gly Cys Leu Pro
      325          330          335
Arg Ala Pro Cys Tyr Arg Phe Tyr Ser Thr Arg Gly Thr Leu
      340          345          350

```

<210> 5803

<211> 692

<212> DNA

<213> Homo sapiens

<400> 5803

naccgctgaa ggggacgccg ggaacaggaa tttcttcaca tggctcctgg agaagtgacc

60

atcacagttc gcctcatccg ttcctttgaa catcgcaatt tcaaacctgt agtgtatcac

120

actttgagga tgaggacagg gcagaactat accgggtgcc tgccaagagc accttgctac
1140
aggttctaca gcaccagagg tactttgtaa aagccctgac accagcattt ttggctctgtg
1200
taggatcctc tcctttttgc aagaattttc tccgggggag aaaggtgtac cagatacgat
1260
gactaagcca gggcccttgg atctcctccc ttaccctcct ctgctgggaa cctagcacac
1320
ctgaatcagc tggacatact gctggagtcc agtgctttct ttccgtcacc ctggggatag
1380
tccttcctgg catcgtgggt ggggaggagc ctctggcttc cctaaactgc agcctctctg
1440
gctgggtcttc actttcctca gttgatataa aactctgggt cttggccatg atgtccttgg
1500
actccatcgc taaagggacc atctgctgca gttaccacag caactgacct gagcggcacc
1560
ctgggtctgtg gagatggact caggatccag tgacatgatt ctgaactttt gtggagtgtg
1620
acaccttaga gaagctaccc ctcaaactgc acatctacac acaaacaac aatgcatagg
1680
attccaaggc tttaaagctg agagaccctg gctcaagtt atttcatgcg cacagagggg
1740
agccatgtgg ggttgctgaa gatgccttga ggtgaaatgg gggcaggaaa gccacatctt
1800
gctctgcatt tataaagacc gtacaaactg agatccttgg taccctctaaa aagattgcc
1860
attttcttca tctttgccat atggaggact gtgacagact ttggacagtg gcctcttgag
1920
ttcctctgca gttttgacat ttaggatttt gtgtctttta aactggaaaa tcttctagca
1980
tgttgggttg ttacagagta tatttttgc tgcagctgtt tgttgcccca ttcttaagag
2040
gagtttatcc atcctgactt gtagctgtgt gacttcttgc agtgccccca ccccatacc
2100
cccgggagag tgtacttccc tgctcccaat gcagagggat atgcacaggc atgagctgtc
2160
ctgcgtctga cagaagcctg aagagtcatg tgtgggttggc ctgtgctctt ccctctgctg
2220
tgagaacaca tttccacagc aggagccgtt ccatggagcc gagctacagc agctggcctg
2280
cagccactga gtgtcacagc aatgagagag caatgtttgc tgtagtaagc agtgagattt
2340
aggggttggg tgttactata gcagagctaa tacatgagta aactgaaaaa aaaaaaaaaa
2400
aaaaaaaaaa aaaaaaaaaa
2418

<210> 5802

<211> 350

<212> PRT

<213> Homo sapiens

<400> 5802

Asp Pro Thr Ser Asp Asp Val Met Asp Ser Phe Leu Glu Lys Phe Gln

450	455	460
Leu Gly Val Tyr Trp Gln His Lys Pro Lys Cys Phe Ser Asp Phe Ile		
465	470	475
Glu Leu Leu Thr Leu Val Ser Gln Lys Met Cys Val Val Val Tyr Pro		480
	485	490
Glu Val Glu Arg Gly Ser Gly Thr Glu Glu Ala Asn Glu Asp Met Glu		495
	500	505
Glu Gln Gln Gln Pro Met Tyr Gln Pro Thr Pro Thr Lys Asp Lys Asp		510
	515	520
Val Ala Gly Gln Pro Gln Pro		525
	530	535

<210> 5801

<211> 2418

<212> DNA

<213> Homo sapiens

<400> 5801

```

nntccggaag tgctcagtc tgttcatagc aactcctaga gggcagagat ttcactctgct
60
ctgccaccgc ctatatagcc agccactaga acaggccgga agcgcagaaa gagctaagat
120
cccacctcag acgacgtcat ggactcgttc ctggaaaagt tccagagcca gccttacgct
180
ggcggccttc atgaggacca gtgggagaag gaatttgaaa aggtccccct atttatgtcg
240
agagcgccat cagaaattga tcccaggagg aatcctgact tggcttgtct ccagtcaatt
300
atttttgatg aggagcgttc tccagaagaa caggccaaga cctataaaga tgagggcaat
360
gattacttta aagaaaaaga ctacaagaaa gctgtaattt catacactga aggcttaaag
420
aagaaatgtg cagatcctga tttgaatgct gtcctttata ccaaccgggc agcagcacag
480
tactatctgg gcaattttcg ttctgctctc aatgatgtga cagctgccag aaagctaaaa
540
ccctgccacc tcaaagcaat aataagaggt gccttatgcc atctggaact gaaacacttt
600
gccgaggccg tgaactggtg tgatgaggga ctgcaaatag atgcaaaga gaagaagctt
660
ctggaaatga gggctaaagc agacaagctg aagcgaattg aacagaggga tgtgaggaaa
720
gccaaactga aagaaaagaa ggagaggaat cagaatgagg ctttactcca ggccatcaag
780
gctaggaata tcaggctctc agaagctgcc tgtgaggatg aagattcagc ctcagaaggt
840
ctaggtgagc ttttctgga tggactcagc actgagaacc cccatggagc caggctgagt
900
ctagatggcc agggcaggct gagctggcct gtgctcttct tgtaccaga gtatgccag
960
tcggacttca tctctgcttt tcatgaggac tccagggtta ttgatcatct aatggtgatg
1020
tttggtgaaa caccctcttg ggacctagag caaaaatatt gcctgataat ttggaggctc
1080

```

	20		25		30
Gly Val	Ala Leu Lys Lys Glu Ile	Gly Leu Val Ser	Ala Cys Gly Ile		
	35	40	45		
Ile Val	Gly Asn Ile Ile Gly Ser Gly Ile	Phe Val Ser Pro Lys Gly			
	50	55	60		
Val Leu	Glu Asn Ala Gly Ser Val Gly Leu Ala Leu Ile Val Trp Ile				
65		70	75		80
Val Thr	Gly Phe Ile Thr Val Val Gly Ala Leu Cys Tyr Ala Glu Leu				
	85	90	95		
Gly Val	Thr Ile Pro Lys Ser Gly Gly Asp Tyr Ser Tyr Val Lys Asp				
	100	105	110		
Ile Phe	Gly Gly Leu Ala Gly Phe Leu Arg Leu Trp Ile Ala Val Leu				
	115	120	125		
Val Ile	Tyr Pro Thr Asn Gln Ala Val Ile Ala Leu Thr Phe Ser Asn				
	130	135	140		
Tyr Val	Leu Gln Pro Leu Phe Pro Thr Cys Phe Pro Pro Glu Ser Gly				
145		150	155		160
Leu Arg	Leu Leu Ala Ala Ile Cys Leu Leu Leu Leu Thr Trp Val Asn				
	165	170	175		
Cys Ser	Ser Val Arg Trp Ala Thr Arg Val Gln Asp Ile Phe Thr Ala				
	180	185	190		
Gly Lys	Leu Leu Ala Leu Ala Leu Ile Ile Ile Met Gly Ile Val Gln				
	195	200	205		
Ile Cys	Lys Gly Glu Tyr Phe Trp Leu Glu Pro Lys Asn Ala Phe Glu				
	210	215	220		
Asn Phe	Gln Glu Pro Asp Ile Gly Leu Val Ala Leu Ala Phe Leu Gln				
225		230	235		240
Gly Ser	Phe Ala Tyr Gly Gly Trp Asn Phe Leu Asn Tyr Val Thr Glu				
	245	250	255		
Glu Leu	Val Asp Pro Tyr Lys Asn Leu Pro Arg Ala Ile Phe Ile Ser				
	260	265	270		
Ile Pro	Leu Val Thr Phe Val Tyr Val Phe Ala Asn Val Ala Tyr Val				
	275	280	285		
Thr Ala	Met Ser Pro Gln Glu Leu Leu Ala Ser Asn Ala Val Ala Val				
	290	295	300		
Thr Phe	Gly Glu Lys Leu Leu Gly Val Met Ala Trp Ile Met Pro Ile				
305		310	315		320
Ser Val	Ala Leu Ser Thr Phe Gly Gly Val Asn Gly Ser Leu Phe Thr				
	325	330	335		
Ser Ser	Arg Leu Phe Phe Ala Gly Ala Arg Glu Gly His Leu Pro Ser				
	340	345	350		
Val Leu	Ala Met Ile His Val Lys Arg Cys Thr Pro Ile Pro Ala Leu				
	355	360	365		
Leu Phe	Thr Cys Ile Ser Thr Leu Leu Met Leu Val Thr Ser Asp Met				
	370	375	380		
Tyr Thr	Leu Ile Asn Tyr Val Gly Phe Ile Asn Tyr Leu Phe Tyr Gly				
385		390	395		400
Val Thr	Val Ala Gly Gln Ile Val Leu Arg Trp Lys Lys Pro Asp Ile				
	405	410	415		
Pro Arg	Pro Ile Lys Ile Asn Leu Leu Phe Pro Ile Ile Tyr Leu Leu				
	420	425	430		
Phe Trp	Ala Phe Leu Leu Val Phe Ser Leu Trp Ser Glu Pro Val Val				
	435	440	445		
Cys Gly	Ile Gly Leu Ala Ile Met Leu Thr Gly Val Pro Val Tyr Phe				

ttgaggaaca tattgagaaa ggttcagatt gcagaaaccc agccctgccc ctgcctcctg
 3060
 catccagccc ccaacatggg gccaaagctt ccagaagcca aaaagcttct gatttttaag
 3120
 gtagtgggca tctctctcct aatgacgaag ctgctcagca actccacctg cccgccgcag
 3180
 gaaggagcag tcccctgcta tccctgcagc cactcccagc acaccgcac acagccagca
 3240
 ccaccgcccc caccgtgcac ttctcctctc tgggccttgg cttgggacca ggtacgaagg
 3300
 atccccaaagc ctttcaggcc tgagatcaga gccagatcag ccttaagtca cctcccatcc
 3360
 aagaacttgg cctaaaaata ctcccctatt tctaaccctc aggacggatc tgatattaaa
 3420
 tgcttccct gggaggaagg gtgctttccc cctccctaga ggtgcccatt ccataccctg
 3480
 ggagactgag gagagcattg gctgaagccc agttccttcc ccatccatcc ccaactccaa
 3540
 taatccccc ctcctcgcag gtctcagtgt catgctgtct tggggcaggg tgaaagggta
 3600
 gtggcagcag ggcgcccact ctggagatcc tcaaaaaagg cctcctctg tggtggcag
 3660
 cctctgacct ttccctgggc ttcaaaggaa ggctatggag tttgctgtgg gccctgcaac
 3720
 cttcccagcc actcctgctg cactaaggac ttaggatcct tttatcaca atcgggatcc
 3780
 tctccccac ccgaattct gtctgcttaa actggaatac acaggagccc ttctggcct
 3840
 ggatggtgtc tcccagcttc cccgccagc ttgccaccc catagttggg gagatgccaa
 3900
 gtttggtctg agttgtgacc ctttcagagt agatgcccgg caggctgggg ttggcccctg
 3960
 gaggtcagg ggaccatctt cttattccct cttttctcat tctccaact tctcccctc
 4020
 cttcaattat tttttttaa agttgatgcc ttactttttg gataaatatt tttgaagctg
 4080
 gtatttctat ttcttttga ttttttttaa tgtaagggtg ttttggggga tggagttaga
 4140
 accttaatga taatttcttt cgtttggtgt aggttttaga gatttgtttt gtggagaggt
 4200
 ttttttcttt tgatgtaata aaatttaaaa tggaaatgaa aaaaaaaaaa aaaaaaaaaa
 4260
 a
 4261

<210> 5800

<211> 535

<212> PRT

<213> Homo sapiens

<400> 5800

Met Glu Glu Gly Ala Arg His Arg Asn Asn Thr Glu Lys Lys His Pro
 1 5 10 15
 Gly Gly Gly Glu Ser Asp Ala Ser Pro Glu Ala Gly Ser Gly Gly Gly

aaaggagagt acttctggct ggagccaaag aatgcatttg agaatttcca ggaacctgac
1440
atcggcctcg tcgactggc tttccttcag ggctcctttg cctatggagg ctggaacttt
1500
ctgaattacg tgactgagga gcttgttgat ccctacaaga accttcccag agccatcttc
1560
atctccatcc cactggtcac atttgtgtat gtctttgcc aatgtcgctta tgtcactgca
1620
atgtccccc aggagctgct ggcattcaac gccgtcgctg tgacttttgg agagaagctc
1680
ctaggagtca tggcctggat catgcccatt tctgttgccc tgtccacatt tggaggagtt
1740
aatgggtctc tcttcacctc ctctcgctg ttcttcgctg gagcccgaga gggccacctt
1800
cccagtgtgt tggccatgat ccacgtgaag cgctgcaccc caatcccagc cctgctcttc
1860
acatgcatct ccacctgct gatgctggc accagcgaca tgtacacact catcaactac
1920
gtgggcttca tcaactacct cttctatggg gtcacggtt ctggacagat agtccttcgc
1980
tggaagaagc ctgatatccc ccgcccac cagatcaacc tgctgttccc catcatctac
2040
ttgctgttct gggccttctt gctggctctt agcctgtggt cagagccggt ggtgtgtggc
2100
attggcctgg ccatcatgct gacaggagt cctgtctatt tctgggtgt ttactggcaa
2160
cacaagccca agtgtttcag tgacttcatt gagctgctaa ccctggtgag ccagaagatg
2220
tgtgtggtcg tgtacccga ggtggagcgg ggctcgggga cagaggaggc taatgaggac
2280
atggaggagc agcagcagcc catgtaccaa ccactccca cgaaggacaa ggacgtggcg
2340
gggcagcccc agccctgagg accaccattc cctggctact ctctccttc tcccccttt
2400
atcctacctc cctgccttgg tcccgccaa acatgcgagt acacacacac ccctctctct
2460
gcttttgcga ggcagtggta ggactttggt gtgggtggtg agaaattgta aacaaaaact
2520
gacattcata cccaaagaac cagcctctca cccagggtc catgtcccag gcccactcc
2580
agtgtgccc acactcccag ctgctggagg agaggggaga tgccaagggt ccctgcagga
2640
cctccctcgg ggccacaccc tcagctgcct cttcaggaac cggagctcat tactgccttc
2700
cctcccaggg agggcccttc agagaggaga ggccacagga gctgcattgt ggggggacag
2760
gctcaagcaa ttctgtcccc atcaaggggt cagctggaga gacccaagac cctatctgtt
2820
caccagggac ccaaaatcca aggggatgct tccctctgcc ctctttctg cccctcccca
2880
tcatacctgc acccacccca gccagggtc cctgtccaga attcggttct cctcaggacg
2940
ccaactccca gagctaagga ccaaggagaa gaacagctc tccaccccca agccaggcgg
3000

100

105

<210> 5799

<211> 4261

<212> DNA

<213> Homo sapiens

<400> 5799

agtgggtgga gaagccactc tcccgaacc agagggatgg ggccggctgt gcagtagaac

60

ggggatcgaa aagaggaaaa caagggcacg aagaccagcg agaaagaaga ggacacctgg

120

gaaaggcgga agcagaagac ggggaaggga aaagaaaccc atagcagggtg gaaaccagat

180

ctagagcaac accgtcaggt tcacagtttg tttttctaga agagaagaaa gtacctgagg

240

attgctcttt tttctaccg ttaatgaaaa ctacttttgt cttcatcata aaagaaaaaa

300

ctaaggggag gtaaaggcag tctcctgttt tattaggggg agaggtgaag ggaaatccag

360

gctcactttc tgaataagcc actgcctggg gcacagagca gaaccatcct ggtttctgaa

420

gacacatccc tttcagcaga attccagccg gagtcgctgg cacagttcta tttttatatt

480

taaagtgtatg tctcccctgg cttttttttt tttttttttt ttttttttagc aacacttttc

540

ttgtttgtaa acgcgagtga ccagaaagtg tgaatgcgga gtaggaatat ttttcgtgtt

600

ctcttttata tgcttgccct ttttagagag tagcagtggg tcctatttcg gaaaaggacg

660

ttctaattca aagctctctc ccaatatatt tacacgaata cgcattttaga aaggagggca

720

gcttttgagg ttgcaatcct actgagaagg atggaagaag gagccaggca ccgaaacaac

780

accgaaaaga aacaccaggg tgggggcgag tcggacgcca gccccgaggc tggttccgga

840

gggggcggag tagccctgaa gaaagagatc ggattgggtc gtgcctgtgg tatcatcgta

900

gggaacatca tcggctctgg aatctttgtc tcgcaaagg gagtgctgga gaatgctggg

960

tctgtgggcc ttgctctcat cgtctggatt gtgacgggct tcatcacagt tgtgggagcc

1020

ctctgctatg ctgaactcgg ggtcaccatc cccaaatctg gaggtgacta ctctatgtc

1080

aaggacatct tcggaggact ggctgggttc ctgaggctgt ggattgctgt gctgggtgatc

1140

taccacacca accaggctgt catcgccctc accttctcca actacgtgct gcagccgctc

1200

ttcccacct gcttcccccc agagtctggc cttcggtctc tggctgccat ctgcttattg

1260

ctcctcatat gggtaactg ttccagtgtg cgggtggcca cccgggttca agacatcttc

1320

acagctggga agctcctggc cttggccctg attatcatca tggggattgt acagatatgc

1380

```
<210> 5797
<211> 405
<212> DNA
<213> Homo sapiens
```

```
<400> 5797
ctcagatcaa taccgccgact ggccagtcga gggaactgct gagagcggct tgcgtgtgtc
60
gaggagcaga aagaggatgg ccctcaactcc agctcctgca ctgccagcag cccaccctgc
120
ttctctcctg ccagcagcca aaagcaggca actgccggac agtcctaacc caaggcgggt
180
agaaggggagc agagaccagg cctggccccct tcagactttc tcacagagaa attacagatc
240
tctaagcctc tattgttggc tggcgaggga gggaagaaca tcaagttatc agggaaatca
300
aggatccctc cgcccccgcc ctgaaccagc aggtccggaa gggagcaagc ggtcagggag
360
gccagtgcct tgcgggaacc ccagcctcat gaccaacctc ggccg
405
```

```
<210> 5798
<211> 109
<212> PRT
<213> Homo sapiens
```

4961

ccacatacaa agaggaaaga tgaaactttt attgttacat ttattgacac tggatattta
 60
 ttatctgtta tataaccaggc aaaatggaca caccatcagg agataagacc tgtatcttac
 120
 gtgtaagatg aaacttatat ttattgattg aattattgaa tactttttga gtatttgcta
 180
 tataaccaggc aaaaggcaca gaacaaatta tttgttcaca gttactttta actctttcag
 240
 caatgcctga gtcctcttta tagaaacttc attttgctaa gttagcaacc attcattttt
 300
 ttggttactc ttcattgata gttttctcaa gtgtctcttc aaatactgca taatggata
 360
 gaccatttaa tattccaaac ataactgaa agactagagg aatcgccatt aatttcattt
 420
 gtgtttgaca aagcgtcatc caatggatta aaacccttcc ttttggtggc agtggaaacgg
 480
 tatgatactt ggttgccagg cgtccatttt tagtaaaagc caaagaactg ggatagaaaa
 540
 caccacaaac tatgccaatc agtgagcttc tgaaaacaca gttttccttg cttatattat
 600
 ctgaatacaa agcatcaatt acaaaaagct tgtcagtaac aacagtagac aaaaatggaa
 660
 gtgtagccaa tgatgcatat gtcttcaaag catcatgttt aaccttgaag cagcgtctga
 720
 acaggaagtt tgagaatatt ccagagaaac cagctgttgt tccaaatgtc gccatttgat
 780
 atatattttg tgtcatttct tttctaagat agtcaaaatt tttttctatg atttctatga
 840
 ccattggtct tctgagtttt gcattctcta gagaaggact gggctgacca tgcatagatg
 900
 ctgccatctt gaaaaccttg ggcgttccct cagttccac cggcaccaca cctgaatccc
 960
 ttggttagt cccagcctca taccgaaca cca
 993

<210> 5796

<211> 200

<212> PRT

<213> Homo sapiens

<400> 5796

Met	Ala	Ala	Ser	Met	His	Gly	Gln	Pro	Ser	Pro	Ser	Leu	Glu	Asp	Ala
1				5				10					15		
Lys	Leu	Arg	Arg	Pro	Met	Val	Ile	Glu	Ile	Ile	Glu	Lys	Asn	Phe	Asp
		20					25						30		
Tyr	Leu	Arg	Lys	Glu	Met	Thr	Gln	Asn	Ile	Tyr	Gln	Met	Ala	Thr	Phe
		35				40						45			
Gly	Thr	Thr	Ala	Gly	Phe	Ser	Gly	Ile	Phe	Ser	Asn	Phe	Leu	Phe	Arg
		50				55					60				
Arg	Cys	Phe	Lys	Val	Lys	His	Asp	Ala	Leu	Lys	Thr	Tyr	Ala	Ser	Leu
65				70						75				80	
Ala	Thr	Leu	Pro	Phe	Leu	Ser	Thr	Val	Val	Thr	Asp	Lys	Leu	Phe	Val
				85				90						95	
Ile	Asp	Ala	Leu	Tyr	Ser	Asp	Asn	Ile	Ser	Lys	Glu	Asn	Cys	Val	Phe

ggggtattccc actgataggg catggccacc tgatcatgtg acaagagcct caggtgtccc
 2520
 acgctcatct tagcaaccag cagcagccat atgaccagat gtacgtagat cagcttcttg
 2580
 atttcatact tgaggggtcac actcatctgg tagtgcattg cgacgcgtc ccggtgctga
 2640
 aagtcgctgc cgtcggtgcc ggccgctcgc gggcctgctc gagacgccat tgtgcctgcc
 2700
 cagaaccccc gaaccctca cgcggacctg gtaccgcaac gacagccaag cggcccagt
 2760
 accctat
 2767

<210> 5794

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5794

Met	Ala	Ser	Met	Gly	Leu	Gln	Val	Met	Gly	Ile	Ala	Leu	Ala	Val	Leu
1				5				10				15			
Gly	Trp	Leu	Ala	Val	Met	Leu	Cys	Cys	Ala	Leu	Pro	Met	Trp	Arg	Val
		20					25					30			
Thr	Ala	Phe	Ile	Gly	Ser	Asn	Ile	Val	Thr	Ser	Gln	Thr	Ile	Trp	Glu
	35					40					45				
Gly	Leu	Trp	Met	Asn	Cys	Val	Val	Gln	Ser	Thr	Gly	Gln	Met	Gln	Cys
	50				55					60					
Lys	Val	Tyr	Asp	Ser	Leu	Leu	Ala	Leu	Pro	Gln	Asp	Leu	Gln	Ala	Ala
65					70				75					80	
Arg	Ala	Leu	Val	Ile	Ile	Ser	Ile	Ile	Val	Ala	Ala	Leu	Gly	Val	Leu
			85					90					95		
Leu	Ser	Val	Val	Gly	Gly	Lys	Cys	Thr	Asn	Cys	Leu	Glu	Asp	Glu	Ser
		100					105					110			
Ala	Lys	Ala	Lys	Thr	Met	Ile	Val	Ala	Gly	Val	Val	Phe	Leu	Leu	Ala
		115				120						125			
Gly	Leu	Met	Val	Ile	Val	Pro	Val	Ser	Trp	Thr	Ala	His	Asn	Ile	Ile
	130					135				140					
Gln	Asp	Phe	Tyr	Asn	Pro	Leu	Val	Ala	Ser	Gly	Gln	Lys	Arg	Glu	Met
145				150					155					160	
Gly	Ala	Ser	Leu	Tyr	Val	Gly	Trp	Ala	Ala	Ser	Gly	Leu	Leu	Leu	Leu
			165				170					175			
Gly	Gly	Gly	Leu	Leu	Cys	Cys	Asn	Cys	Pro	Pro	Arg	Thr	Asp	Lys	Pro
		180					185					190			
Tyr	Ser	Ala	Lys	Tyr	Ser	Ala	Ala	Arg	Ser	Ala	Ala	Ala	Ser	Asn	Tyr
		195				200						205			
Val															

<210> 5795

<211> 993

<212> DNA

<213> Homo sapiens

<400> 5795

gggtgccacgg ctccactctg ttctctctctg ctttgttctt ccttggactg agctcagcgc
900
aggctgtgac cccaggaggg ccttgccacg ggccactggc tgctggggac tggggactgg
960
gcagagactg agccaggcag gaaggcagca gccttcagcc tctctggccc actcggacaa
1020
cttcccaagg ccgctctctg ctagcaagaa cagagtccac cctcctctgg atattgggga
1080
gggacggaag tgacagggtg tgggtgggga gtggggagct ggcttctgct ggccaggata
1140
gcttaaccct gactttggga tctgcctgca tcggcggttg cactgtccc catttacatt
1200
ttcccactc tgtctgcctg catctcctct gtccgggta ggcttgata tcacctctgg
1260
gactgtgcct tgctcaccga aaccgcgcgc caggagtatg gctgaggcct tgccccca
1320
cctgcctggg aagtgcagag tggatggacg ggtttagagg ggaggggcca aggtgctgta
1380
aacaggtttg ggcagtgggt ggggaggggg ccagagaggc ggctcagggt gccagctct
1440
gtggcctcag gactctctgc ctcaccgct tcagcccagg gccctggag actgatcccc
1500
tctgagtcct ctgccccttc caaggacact aatgagcctg ggaggggtggc agggaggagg
1560
ggacagcttc acccttgga gtcctgggggt ttttctctt ccttctttgt ggtttctgtt
1620
ttgtaattta agaagagcta ttcactctg taattattat tattttctac aataaatggg
1680
acctgtgcac aggaggaaaa aaaaaaaaaa aaaaggagac cacagcctgc caaggagca
1740
gctgccccaa tgtttctga cccgtgacct agagatgaag taatttgatt tattccctat
1800
ttcctttagt ctcaatggct aaggggtaat ggatggaaat ggggagaatg accgagtaga
1860
ggcaaggacg aagctcattc ttaaagaaaa acctcaaagt tcaacttcaa acagctgaaa
1920
tttgtttcat agctgttggt caccagttc tagccaacca ggaataaatt atagttttgc
1980
cacctcagca gatggcaaaa ggagctttcc agaactttgg cctggctctgc accaggtacc
2040
aacatcacag ctgctaaaat caccagaagg gattttggaa ccgctgtact agtgtccttt
2100
cattcgatgg gatgtccagg cttcacccca aagaggcttc atttatgctt cttctctgt
2160
gtgctgggta accaagagtc taggagcttc ttgctgtagt acaactgcca ggcattgact
2220
tgactgcca acaccaacac caggtagatg atggaaacgg cagaaaaacc aaagaggaaa
2280
cggtaggcct tgccatggcg gtagagctgc tgtgcagcag ggaacatctc catgctgcca
2340
taaagttagt gagcgatgga aaagagtccc atgctgatca tggagagcac caggtagcta
2400
atgttgttgc ggggaaagga gagaaggccc aagagagagg gcaaaatgct cagcaatac
2460

325 330 335
 Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His Glu
 340 345 350
 Lys Leu Phe Glu Leu Ile Leu Met Glu Asp Ile Lys Phe Pro Arg Thr
 355 360 365
 Leu Ser Ser Asp Ala Lys Ser Leu Leu Ser Gly Leu Leu Ile Lys Asp
 370 375 380
 Pro Asn Lys Arg Leu Gly Gly Gly Pro Asp Asp Ala Lys Glu Ile Met
 385 390 395 400
 Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp Lys
 405 410 415
 Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp Thr
 420 425 430
 Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr Ile Thr Pro
 435 440 445
 Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu Arg
 450 455 460
 Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu
 465 470 475

<210> 5793

<211> 2767

<212> DNA

<213> Homo sapiens

<400> 5793

aattcggcac taggggcagc tgctcggtgg aaggaactgg tctgctcaca cttgctggct
 60
 tgcgcacacag gactggcttt atctcctgac tcacggtgca aaggtgcact ctgcgaacgt
 120
 taagtcgctc cccagcgctt ggaatcctac ggccccaca gccggatccc ctcagccttc
 180
 caggtcctca actcccgtgg acgctgaaca atggcctcca tggggctaca ggtaatgggc
 240
 atcgcgctgg ccgtcctggg ctggctggcc gtcacgctgt gctgcgcgct gcccatgtgg
 300
 cgcgtgacgg ccttcacgag cagcaacatt gtcacctcgc agaccatctg ggagggccta
 360
 tggatgaact gcgtggtgca gagcaccggc cagatgcagt gcaagggtga cgactcgctg
 420
 ctggcactgc cgcaggacct gcaggcggcc cgcgcctcgc tcacatcag catcatcggtg
 480
 gctgctctgg gcgtgctgct gtccgtggtg gggggcaagt gtaccaactg cctggaggat
 540
 gaaagcgcca aggccaagac catgatcggt gcgggcgtgg tgttcctggt ggccggcctt
 600
 atgggtgatag tgccggtgtc ctggacggcc cacaacatca tccaagactt ctacaatccg
 660
 ctgggtggcct ccgggcagaa gcgggagatg ggtgcctcgc tctacgtcgg ctgggcccgc
 720
 tccggcctgc tgctccttgg cggggggctg ctttctgtgca actgtccacc ccgcacagac
 780
 aagccttact ccgccaagta ttctgctgcc cgctctgctg ctgccagcaa ctacgtgtaa
 840

ggctttggga gaagagatgc tgccatttaa ccccttggtg ctgaaaatga gaaaatcccc
 3180
 aactatgcat gccaaaggggt taatgaaaca aatagctgtt gacgtttgct catttaagaa
 3240
 tttgaaacgt tatgatgacc tggcaacaaa aaaaaaaaaa aaaaa
 3285

<210> 5792

<211> 479

<212> PRT

<213> Homo sapiens

<400> 5792

Met	Ser	Asp	Val	Thr	Ile	Val	Lys	Glu	Gly	Trp	Val	Gln	Lys	Arg	Gly
1				5					10					15	
Glu	Tyr	Ile	Lys	Asn	Trp	Arg	Pro	Arg	Tyr	Phe	Leu	Leu	Lys	Thr	Asp
			20					25					30		
Gly	Ser	Phe	Ile	Gly	Tyr	Lys	Glu	Lys	Pro	Gln	Asp	Val	Asp	Leu	Pro
		35					40					45			
Tyr	Pro	Leu	Asn	Asn	Phe	Ser	Val	Ala	Lys	Cys	Gln	Leu	Met	Lys	Thr
	50				55						60				
Glu	Arg	Pro	Lys	Pro	Asn	Thr	Phe	Ile	Ile	Arg	Cys	Leu	Gln	Trp	Thr
65					70					75					80
Thr	Val	Ile	Glu	Arg	Thr	Phe	His	Val	Asp	Thr	Pro	Glu	Glu	Arg	Glu
				85					90					95	
Glu	Trp	Thr	Glu	Ala	Ile	Gln	Ala	Val	Ala	Asp	Arg	Leu	Gln	Arg	Gln
			100					105					110		
Glu	Glu	Glu	Arg	Met	Asn	Cys	Ser	Pro	Thr	Ser	Gln	Ile	Asp	Asn	Ile
		115					120						125		
Gly	Glu	Glu	Glu	Met	Asp	Ala	Ser	Thr	Thr	His	His	Lys	Arg	Lys	Thr
		130				135						140			
Met	Asn	Asp	Phe	Asp	Tyr	Leu	Lys	Leu	Leu	Gly	Lys	Gly	Thr	Phe	Gly
145					150					155					160
Lys	Val	Ile	Leu	Val	Arg	Glu	Lys	Ala	Ser	Gly	Lys	Tyr	Tyr	Ala	Met
			165					170						175	
Lys	Ile	Leu	Lys	Lys	Glu	Val	Ile	Ile	Ala	Lys	Asp	Glu	Val	Ala	His
		180						185					190		
Thr	Leu	Thr	Glu	Ser	Arg	Val	Leu	Lys	Asn	Thr	Arg	His	Pro	Phe	Leu
		195					200					205			
Thr	Ser	Leu	Lys	Tyr	Ser	Phe	Gln	Thr	Lys	Asp	Arg	Leu	Cys	Phe	Val
	210					215					220				
Met	Glu	Tyr	Val	Asn	Gly	Gly	Glu	Leu	Phe	Phe	His	Leu	Ser	Arg	Glu
225					230					235					240
Arg	Val	Phe	Ser	Glu	Asp	Arg	Thr	Arg	Phe	Tyr	Gly	Ala	Glu	Ile	Val
			245						250					255	
Ser	Ala	Leu	Asp	Tyr	Leu	His	Ser	Gly	Lys	Ile	Val	Tyr	Arg	Asp	Leu
		260						265					270		
Lys	Leu	Glu	Asn	Leu	Met	Leu	Asp	Lys	Asp	Gly	His	Ile	Lys	Ile	Thr
		275					280					285			
Asp	Phe	Gly	Leu	Cys	Lys	Glu	Gly	Ile	Thr	Asp	Ala	Ala	Thr	Met	Lys
	290					295					300				
Thr	Ser	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Ala	Pro	Glu	Val	Leu	Glu	Asp
305					310					315					320
Asn	Asp	Tyr	Gly	Arg	Ala	Val	Asp	Trp	Trp	Gly	Leu	Gly	Val	Val	Met

aggttacctt tctacaacca ggaccatgag aaactttttg aattaatatt aatggaagac
1560
attaaatttc ctggaacact ctcttcagat gcaaaatcat tgctttcagg gctcttgata
1620
aaggatccaa ataaacgcct tgggtggagga ccagatgatg caaaagaaat tatgagacac
1680
agtttcttct ctggagtaaa ctggcaagat gtatatgata aaaagcttgt acctcctttt
1740
aaacctcaag taacatctga gacagatact agatattttg atgaagaatt tacagctcag
1800
actattacaa taacaccacc tgaaaaatat gatgaggatg gtatggactg catggacaat
1860
gagaggcggc cgcattttcc tcaattttcc tactctgcaa gtggacgaga ataagtctct
1920
ttcattctgc tacttccactg tcatcttcaa tttattactg aaaatgattc ctggacatca
1980
ccagtccctag ctcttacaca tagcaggggc accttccgac atcccagacc agccaagggt
2040
ctcaccctt cgccacctt caccctcatg aaaacacaca tacacgcaa tacactccag
2100
ttttgtttt tgcatgaaat tgtatctcag tctaaggctt catgctgttg ctgctactgt
2160
cttactatta tagcaacttt aagaagtaat tttccaacct ttggaagtca tgagcccacc
2220
attgttcatt tgtgcaccaa ttatcatctt ttgatctttt agtttttccc tcagtgaagg
2280
ctaaatgaga tacactgatt ctaggtacat tttttaactt tctagaagag aaaaactaac
2340
tagactaaga agatttagtt tataaattca gaacaagcaa ttgtggaagg gtggtggcgt
2400
gcatatgtaa agcacatcag atccgtgcgt gaagtaggca tatatcacta agctgtggct
2460
ggaattgatt aggaagcatt tggtagaagg actgaacaac tgttgggata tatatatata
2520
tatataattt ttttttttta aattcctggt ggatactgta gaagaagccc atatcacatg
2580
tggatgtcga gacttcacgg gcaatcatga gcaagtgaac actgttctac caagaactga
2640
aggcatatgc acagtcaagg tcacttaaag ggtcttatga aacaatttga gccagagagc
2700
atctttcccc tgtgcttgga aacctttttt ccttcttgac atttatcacc tctgatggct
2760
gaagaatgta gacaggtata atgatactgc ttttcaccaa aatttctaca ccaaggtaaa
2820
cagggtgttg ccttatttaa ttttttactt tcagttctac gtgaattagc tttttctcag
2880
atgttgaaac tttgaatgtc cttttatgat tttgtttata ttgcagtagt atttattttt
2940
tagtgatgag aattgtatgt catgttagca aacgcagctc caacttatat aaaatagact
3000
tactgcagtt acttttgacc catgtgcaag gattgtacac gttgatgaga atcatgcact
3060
ttttctcttc tgttaaaaaa aatgataagg ctctgaaatg gaatatattg gttagaattt
3120

<212> DNA

<213> Homo sapiens

<400> 5791

ntgtacattg tataaactga gtagcattga actgcatttt agaagtatgt catcagaaac
60
aaatcacatt atggaaagga tatacaaatg ccaagtgata tgactctttt ggcatgggtg
120
tagcatggtc cattcagett tcagaatctt tcggaggctc tagtttgggtg cctagtacta
180
gttatttttg ttagaacaat ctctcaaat ttagataatt ttccagttgt atgtctgtca
240
cttttaactc taaagcgtaa gaatcatggt aacctctctc tcccccgcc gtccccgagg
300
ctccatctc cgccgccc cgagcagctg cggggccgccc accgcccgcg ccgcccgttg
360
aggctgagtc atcactagag agtgggaagg gcagcagcag cagagaatcc aaaccctaaa
420
gctgatatca caaagtacca tttctccaag ttgggggctc agaggggagt catcatgagc
480
gatgttacca ttgtgaaaga aggttgggtt cagaagaggg gagaatatat aaaaaactgg
540
aggccaagat acttcctttt gaagacagat ggctcattca taggatataa agagaaacct
600
caagatgtgg atttacctta tcccccaac aacttttcag tggcaaatg ccagttaatg
660
aaaacagaac gaccaaagcc aaacacattt ataatcagat gtctccagtg gactactgtt
720
atagagagaa catttcatgt agatactcca gaggaaggg aagaatggac agaagctatc
780
caggctgtag cagacagact gcagaggcaa gaagaggaga gaatgaattg tagtccaact
840
tcacaaattg ataatatagg agaggaagag atggatgcct ctacaacca tcataaaaga
900
aagacaatga atgattttga ctatttgaaa ctactaggta aaggcacttt tgggaaagt
960
attttggttc gagagaaggc aagtggaaaa tactatgcta tgaagattct gaagaaagaa
1020
gtcattattg caaaggatga agtggcacac actctaactg aaagcagagt attaaagaac
1080
actagacatc cctttttaac atccttgaaa tattccttcc agacaaaaga ccgtttgtgt
1140
tttgtgatgg aatatgttaa tgggggcgag ctgtttttcc atttgtcgag agagcgggtg
1200
ttctctgagg accgcacagc tttctatggt gcagaaattg tctctgcctt ggactatcta
1260
cattccggaa agattgtgta ccgtgatctc aagttggaga atctaagtct ggacaaagat
1320
ggccacataa aaattacaga ttttggactt tgcaaagaag ggatcacaga tgcagccacc
1380
atgaagacat cctgtggcac tccagaatat ctggcaccag aggtgttaga agataatgac
1440
tatggccgag cagtagactg gtggggccta ggggttgtca tgtatgaaat gatgtgtggg
1500

<400> 5790

Xaa Arg Pro Gln Pro Glu Pro Gly Pro Pro Pro Ser Ser Gly Pro Gly
 1 5 10 15
 Gln Gln Ala Gly Arg Gly Gln Val Arg Ala Pro Thr Met Arg Gly Glu
 20 25 30
 Leu Trp Leu Leu Val Leu Val Leu Arg Glu Ala Ala Arg Ala Leu Ser
 35 40 45
 Pro Gln Pro Gly Ala Gly His Asp Glu Gly Pro Gly Ser Gly Trp Ala
 50 55 60
 Ala Lys Gly Thr Val Arg Gly Trp Asn Arg Arg Ala Arg Glu Ser Pro
 65 70 75 80
 Gly His Val Ser Glu Pro Asp Arg Thr Gln Leu Ser Gln Asp Leu Gly
 85 90 95
 Gly Gly Thr Leu Ala Met Asp Thr Leu Pro Asp Asn Arg Thr Arg Val
 100 105 110
 Val Glu Asp Asn His Ser Tyr Tyr Val Ser Arg Leu Tyr Gly Pro Ser
 115 120 125
 Glu Pro His Ser Arg Glu Leu Trp Val Asp Val Ala Glu Ala Asn Arg
 130 135 140
 Ser Gln Val Lys Ile His Thr Ile Leu Ser Asn Thr His Arg Gln Ala
 145 150 155 160
 Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Pro Leu
 165 170 175
 Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile Phe Met Gly Asp Val
 180 185 190
 Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala Pro Leu Met Ala
 195 200 205
 Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val Val Tyr Phe Asp
 210 215 220
 Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val Tyr Leu Gln Gly
 225 230 235 240
 Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala Leu His His Asp
 245 250 255
 Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met Ser Val Pro Glu
 260 265 270
 Ile Ser Ser Ser Gln His Pro Val Lys Thr Gly Leu Ser Asp Ala Phe
 275 280 285
 Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser Arg Arg Arg Ser
 290 295 300
 Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser Lys Val Thr Ser
 305 310 315 320
 Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys Leu Gln His Arg
 325 330 335
 Ser Cys Asp Ala Cys Met Ser Ser Asp Leu Thr Phe Asn Cys Ser Trp
 340 345 350
 Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp Arg Tyr Arg Gln
 355 360 365
 Glu Trp Met Asp Tyr Gly Cys Ala Gln Glu Ala Glu Gly Arg Met Cys
 370 375 380
 Glu Asp Phe Gln Asp Glu Asp His Asp Ser Ala Ser Pro Asp Thr Phe
 385 390 395 400

<210> 5791

<211> 3285

<210> 5789
<211> 1201
<212> DNA
<213> Homo sapiens

<400> 5789
nngcgccgc agcctgagcc agggccccct ccctcgtcag gaccggggca gcaagcaggc
60
cgggggcagg tccgggcacc caccatgcga ggcgagctct ggctcctggt gctggtgctc
120
agggaggctg cccgggcgct gagccccag cccggagcag gtcacgatga gggcccaggc
180
tctggatggg ctgccaaagg gaccgtgcgg ggctggaacc ggagagcccg agagagccct
240
gggcatgtgt cagagccgga caggaccag ctgagccagg acctgggtgg gggcacccctg
300
gccatggaca cgctgccaga taacaggacc aggggtggtg aggacaacca cagctattat
360
gtgtcccgtc tctatggccc cagcgagccc cacagccggg aactgtgggt agatgtggcc
420
gaggccaacc ggagccaagt gaagatccac acaatactct ccaacacca ccggcaggct
480
tcgagagtgg tcttgtcctt tgatttcctt ttctacgggc atcctctgcg gcagatcacc
540
atagcaactg gaggcttcat cttcatgggg gacgtgatec atcggatgct cacagctact
600
cagtatgtgg cgccctgat ggccaacttc aaccctggct actccgacaa ctccacagtt
660
gtttactttg acaatgggac agtctttgtg gttcagtggg accacgttta tctccaaggc
720
tggaagaca agggcagttt caccttcag gcagctctgc accatgacgg ccgcattgtc
780
tttgctata aagagatccc tatgtctgtc ccggaaatca gtcctccca gcatcctgtc
840
aaaaccggcc tatcggatgc cttcatgatt ctcaatccat ccccgatgt gccagaatct
900
cggcgaagga gcatctttga ataccacgc atagagctgg accccagcaa ggtcaccagc
960
atgtcggccg tggagtacac cccattgccg acctgcctgc agcataggag ctgtgacgcc
1020
tgcatgtcct cagacctgac cttcaactgc agctggtgcc atgtcctcca gagatgtcct
1080
agtggctttg accgctatcg ccaggagtgg atggactatg gctgtgcaca ggaggcagag
1140
ggcaggatgt gcgaggactt ccaggatgag gaccacgact cagcctcccc tgacactttc
1200
t
1201

<210> 5790
<211> 400
<212> PRT
<213> Homo sapiens

1	5	10	15
Gln Gly Gln Glu Lys Met Met Met Met Gly Pro Lys Glu Glu Glu Gln			
	20	25	30
Ser Cys Glu Tyr Glu Thr Arg Leu Pro Gly Asn His Ser Thr Ser Gln			
	35	40	45
Glu Ile Phe Arg Gln Arg Phe Arg His Leu Arg Tyr Gln Glu Thr Pro			
50	55	60	
Gly Pro Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp			
65	70	75	80
Leu Arg Pro Glu Lys His Thr Lys Glu Gln Ile Leu Glu Phe Leu Val			
	85	90	95
Leu Glu Gln Phe Leu Thr Ile Leu Pro Glu Glu Leu Gln Ser Trp Val			
	100	105	110
Arg Gly His His Pro Lys Ser Gly Glu Glu Ala Val Thr Val Leu Glu			
	115	120	125
Asp Leu Glu Lys Gly Leu Glu Pro Glu Pro Gln Val Pro Gly Pro Ala			
130	135	140	
His Gly Pro Ala Gln Glu Glu Pro Trp Glu Lys Lys Glu Ser Leu Gly			
145	150	155	160
Ala Ala Gln Glu Ala Leu Ser Ile Gln Leu Gln Pro Lys Glu Thr Gln			
	165	170	175
Pro Phe Pro Lys Ser Glu Gln Val Tyr Leu His Phe Leu Ser Val Val			
	180	185	190
Thr Glu Asp Gly Pro Glu Pro Lys Asp Lys Gly Ser Leu Pro Gln Pro			
	195	200	205
Pro Ile Thr Glu Val Glu Ser Gln Val Phe Ser Glu Lys Leu Ala Thr			
210	215	220	
Asp Thr Ser Thr Phe Glu Ala Thr Ser Glu Gly Thr Leu Glu Leu Gln			
225	230	235	240
Gln Arg Asn Pro Lys Ala Glu Arg Leu Arg Trp Ser Pro Ala Gln Glu			
	245	250	255
Glu Ser Phe Arg Gln Met Val Val Ile His Lys Glu Ile Pro Thr Gly			
	260	265	270
Lys Lys Asp His Glu Cys Ser Glu Cys Gly Lys Thr Phe Ile Tyr Asn			
	275	280	285
Ser His Leu Val Val His Gln Arg Val His Ser Gly Glu Lys Pro Tyr			
290	295	300	
Lys Cys Ser Asp Cys Gly Lys Thr Phe Lys Gln Ser Ser Asn Leu Gly			
305	310	315	320
Gln His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Glu Cys Asn Glu			
	325	330	335
Cys Gly Lys Ala Phe Arg Trp Gly Ala His Leu Val Gln His Gln Arg			
	340	345	350
Ile His Ser Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys Ala			
	355	360	365
Phe Ser Gln Ser Ser Tyr Leu Ser Gln His Arg Arg Ile His Ser Gly			
370	375	380	
Glu Lys Pro Phe Ile Cys Lys Glu Cys Gly Lys Ala Tyr Gly Trp Cys			
385	390	395	400
Ser Glu Leu Ile Arg His Arg Arg Val His Ala Arg Lys Glu Pro Ser			
	405	410	415
His			

ggacaagaga agatgatgat gatgggacca aaggaagagg aacagtcttg tgagtatgag
420
accaggctac ctgggaacca ctctaccagt caagagatct tccgccaacg cttcaggcat
480
ctccgctacc aggagactcc tgggtccccgg gaggccttga gccaaactacg agtactctgc
540
tgtgagtggc tgaggccaga gaaacacacg aaggagcaga tcctggagtt cctggtgctg
600
gaacaattct tgaccatcct gcctgaggag ctccaatcct ggggtgcgggg acatcacccct
660
aagagtggag aggaggctgt gactgtgctg gaggatttag agaaaggact tgaaccagag
720
ccgcaggtcc caggccctgc acatggacct gcacaggaag agccatggga gaagaaggaa
780
tctctgggag cagcccagga agcactgagc atccagctcc agcctaagga gacccagcct
840
ttcccaaaga gtgaacaggt atatttacat tttctgtcag ttgttacaga agatggccca
900
gagcccaagg acaaaggatc attgccacaa ccaccatta ctgaagtgga atcacaggtg
960
ttctcagaaa aacttgctac tgacacctct acatttgaag ctacctctga gggtagctta
1020
gaactgcagc agagaaatcc caaagcggag agactgaggt ggtccctctgc ccaggaggaa
1080
agtttcaggc agatggttgt catccataag gaaattccca cagggaagaa agaccatgaa
1140
tgtagtgaat gtggtaaaac cttcatttat aactcacatc ttgttgtcca ccagagagtt
1200
cattctggag agaaacccta taagtgtagt gactgtggga aaactttcaa acagagctca
1260
aacctcggtc agcatcagag aattcataca ggagagaaac ctttcgaatg taatgaatgt
1320
gggaaggcct tcagatgggg tgctcatctt gtccagcatc agaggattca ctcaggagag
1380
aagccctatg agtgtaatga gtgtgggaag gccttttagtc aaagctcata tctaagtcag
1440
catcggagaa ttcacagtgg agagaaacct tttatatgta aagaatgtgg gaaagcttat
1500
ggatggtgct cagagctcat tagacatcgg agagttcatg ccagaaaaga gccttcccat
1560
tgaattgaag gggagaacgt ctccagacag aattctacat cggctctaac tacttttagga
1620
ctggatccca taaaagttat aagttcctta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1680
aaa
1683

<210> 5788

<211> 417

<212> PRT

<213> Homo sapiens

<400> 5788

Met Ala Val Ser Leu Thr Ala Ala Glu Thr Leu Ala Leu Gln Gly Thr

tcgacagggg ccaggggtccc agcgggtgcg cgagagctgc gcccgtggg gctgcaaggt
 660
 cggcggcgcg ggctgccggc ttttcaggag ctcttgagc tggcccttca cctgctgctg
 720
 cgtgagacct gtgcggctgc gcgaccaatt tgctgggccc gttgatgatg gtgtacatgg
 780
 cgcgc
 785

<210> 5786

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5786

Met Tyr Thr Ile Ile Asn Gly Pro Ser Lys Leu Val Ala Gln Pro His
 1 5 10 15
 Arg Ser His Ala Ala Ala Gly Glu Gly Pro Ala Pro Gly Ala Pro Glu
 20 25 30
 Lys Pro Ala Ala Arg Ala Ala Asp Leu Ala Ala Pro Ala Gly Ala Ala
 35 40 45
 Leu Ala Gln Pro Leu Gly Pro Trp Pro Leu Ser Ser Ala Gly Pro Arg
 50 55 60
 Leu Val Phe Asn Arg Val Asn Arg Arg Arg Asp Pro Ser Lys Ser Pro
 65 70 75 80
 Ser Leu Gln Gly Thr Gln Glu Thr Tyr Thr Leu Ala His Lys Glu Asn
 85 90 95
 Val Arg Phe Val Ser Glu Ala Trp Gln Gln Val Gln Gln Gln Leu Asp
 100 105 110
 Gly Gly Pro Ala Gly Glu Gly Gly Pro Arg Pro Val Gln Tyr Val Glu
 115 120 125
 Arg Thr Pro Asn Pro Arg Leu Gln Asn Phe Val Pro Ile Asp Leu Asp
 130 135 140
 Glu Trp Trp Ala Gln Gln Phe Leu Ala Arg Ile Thr Ser Cys Ser
 145 150 155

<210> 5787

<211> 1683

<212> DNA

<213> Homo sapiens

<400> 5787

nnngctccag tccagtcgtg cagnngngng ntctttctc cgtcaagtc caggaacggt
 60
 tccegggctc ccaccgtctc ggnangccca cngcctggg ccaaagtcg cgaacggaag
 120
 ccngggcgag gaggattctg ggagttggag gccgaggctg cgaccngcag gcgcaaact
 180
 gcccctgggg tgaggctgt aagtggcgcg attcgggca gcgccccgat ggaacctct
 240
 ggtcctgtga gggggccctt gcaagattcc agctggtatg agccttctgc agagctagt
 300
 cagactagga tggctgtatc actaacagca gctgaaactc tggcccttca gggtagacag
 360

180 185 190
 Glu Leu Ser Lys Ser Ile Ala Asn Lys Ile Lys Asp Lys Gln Gly Asp
 195 200 205
 Ile Thr Glu Asp Glu Thr Ile Arg Phe Lys Ser Tyr Leu Leu Ser Met
 210 215 220
 Gly Ile Ala Asn Pro Val Thr Arg Glu Thr Tyr Gly Ser Gly Thr Gln
 225 230 235 240
 Tyr His Met Gln Leu Ala Lys Gln Leu Ala Gly Ile Leu Gln Val Pro
 245 250 255
 Leu Glu Glu Arg Gly Gly Ile Met Ser Leu Thr Glu Val Tyr Cys Leu
 260 265 270
 Val Asn Arg Ala Arg Gly Met Glu Leu Leu Ser Pro Glu Asp Leu Val
 275 280 285
 Asn Ala Cys Lys Met Leu Glu Ala Leu Lys Leu Pro Leu Arg Leu Arg
 290 295 300
 Val Phe Asp Ser Gly Val Met Val Ile Glu Leu Gln Ser His Lys Glu
 305 310 315 320
 Glu Glu Met Val Ala Ser Ala Leu Glu Thr Val Ser Glu Lys Gly Ser
 325 330 335
 Leu Thr Ser Glu Glu Phe Ala Lys Leu Val Gly Met Ser Val Leu Leu
 340 345 350
 Ala Lys Glu Arg Leu Leu Leu Ala Glu Lys Met Gly His Leu Cys Arg
 355 360 365
 Asp Asp Ser Val Glu Gly Leu Arg Phe Tyr Pro Asn Leu Phe Met Thr
 370 375 380
 Gln Ser
 385

<210> 5785

<211> 785

<212> DNA

<213> Homo sapiens

<400> 5785

tttttttttt ttttgacagt ttctccactt tattagcctg gagctcctcc ctgccagccc
 60
 caggggctgg tcgctggtcc ctgggcacag tgagcagggc tgaggtcaga cgggttcggc
 120
 ccttgggccat ggcagcttgg ttgggacagc cgggccaagg gaaaaaaagg tgcaaaagtc
 180
 caaatgctgg cacttcaggt gtggccggca cccagccagg cgagtggggt gggcagggcg
 240
 ccatgcttct ctctggcga caggtcggcc gtgtagcagc gccccctccc agcagccact
 300
 aggaacagct ggtgattctc gccaggaact gctgcgcca cactcgtct aggtcaatgg
 360
 gcacaaagtt ctgcagccgg ggattggggg toctctccac gtactgcaca ggccttggcc
 420
 cgccctcacc ggctgggcca ccatccagct gctgttgac ctgctgccag gcttcggaca
 480
 caaagcggac attctccttg tgggccagt tgtaggtctc ctgggtcccc tggagggatg
 540
 gggacttgga ggggtccgc cggcgattca cagattgaa cacaagcctt ggcctgcac
 600

ttttacccaa atttatttat gacacagagc taagggtttt gtatttaaaa tcctttttgt
 1200
 ccatatgctt gcgtcatgta gaggttgat gacattgagc taagagataa accccgatca
 1260
 attgagaatt tattggaact tcacagtgc atgtaaatct cttttaattt cccccaaat
 1320
 atgggtccagg aaattttatt agtatacgca taggaaaatt cagaaaagt aatgccaata
 1380
 tgaatttaaa atcatgctat agtgcagaac cctcagagtt taacttggaa tatagtggat
 1440
 tttaacttga tcttcaaact taatcatttt ataaagaagg gaatttagtt ttgcagagaa
 1500
 taaaaagaga agttgcatgt tcagacaggt tagattatta ttttggtgta actgaaattc
 1560
 actgattgca catgacaatg ttgggacaaa atatactgca gcatgctata tgaggctcct
 1620
 cccagggtt tttagaagca gtcatagaca tgtcttcaac ataccaaata aaataccttt
 1680
 aaaaatgaaa taattttatt tgacacatta tttatatata ttctatctag gtttctcttt
 1740
 gtttttttta aagtgatgat ttcattggact gggcatttaa aagaaatggc aactgtggtc
 1800
 cttttttggt ttttccaaat gctgtggaat ttttgga
 1839

<210> 5784

<211> 386

<212> PRT

<213> Homo sapiens

<400> 5784

Met	Asp	Arg	Phe	Val	Trp	Thr	Ser	Gly	Leu	Leu	Glu	Ile	Asn	Glu	Thr
1				5					10					15	
Leu	Val	Ile	Gln	Arg	Gly	Val	Arg	Ile	Tyr	Asp	Gly	Glu	Glu	Lys	
			20				25				30				
Ile	Lys	Phe	Asp	Ala	Gly	Thr	Leu	Leu	Ser	Thr	His	Arg	Leu	Ile	
		35				40					45				
Trp	Arg	Asp	Gln	Lys	Asn	His	Glu	Cys	Cys	Met	Ala	Ile	Leu	Leu	Ser
	50					55				60					
Gln	Ile	Val	Phe	Ile	Glu	Glu	Gln	Ala	Ala	Gly	Ile	Gly	Lys	Ser	Ala
65				70					75					80	
Lys	Ile	Val	Val	His	Leu	His	Pro	Ala	Pro	Pro	Asn	Lys	Glu	Pro	Gly
			85					90					95		
Pro	Phe	Gln	Ser	Ser	Lys	Asn	Ser	Tyr	Ile	Lys	Leu	Ser	Phe	Lys	Glu
			100					105					110		
His	Gly	Gln	Ile	Glu	Phe	Tyr	Arg	Arg	Leu	Ser	Glu	Glu	Met	Thr	Gln
		115					120				125				
Arg	Arg	Trp	Glu	Asn	Met	Pro	Val	Ser	Gln	Ser	Leu	Gln	Thr	Asn	Arg
	130					135					140				
Gly	Pro	Gln	Pro	Gly	Arg	Ile	Arg	Ala	Val	Gly	Ile	Val	Gly	Ile	Glu
145				150				155					160		
Arg	Lys	Leu	Glu	Glu	Lys	Arg	Lys	Glu	Thr	Asp	Lys	Asn	Ile	Ser	Glu
			165					170					175		
Ala	Phe	Glu	Asp	Leu	Ser	Lys	Leu	Met	Ile	Lys	Ala	Lys	Glu	Met	Val

	85		90		95										
Gly	Gln	Ala	Pro	Ala	Pro	Pro	Ala	Pro	Gly	Gln	Ala	Gly	Ser	His	Arg
	100				105				110						
Pro	Gly	Ala	Ala	Pro	Ser	Pro	Arg	Cys	Ser	Ser	Gly	Asn	His	Arg	Ser
	115						120				125				
Ser	Leu	Ala	Val	Ala	Trp	Arg	His	Gly	Thr	Trp	Ile	Gly	Gln	Pro	Pro
	130					135					140				
Pro	Cys	Pro													
145															

<210> 5783

<211> 1839

<212> DNA

<213> Homo sapiens

<400> 5783

gtgggagcgg ccattggaccg cttcgtttgg accagcggcc tcctggagat caacgagacc
60
ctggtgatcc agcagcgcgg ggtgcgaatc tacgatggcg aggagaagat aaaatttgat
120
gctgggactc tccttcttag tacacaccga ctgatttggg gagatcagaa aaatcatgag
180
tggtgcatgg ccattctcct ttcccaatt gtgttcattg aagaacaggc ggctggaatt
240
gggaagagt ccaaaatagt ggttcattct caccagctc ctccaaaca agaactggc
300
ccattccaga gtagtaagaa ctctacatc aaactctcct tcaaagaaca tggccagatt
360
gagttttaca ggcgtttatc agaggaaatg acacaaagaa gatgggagaa tatgccagtt
420
tccagtcac tacaacaaa tagaggacc cagccaggaa gaataagggc ttaggaatt
480
gtaggtattg aaaggaaact ggaagaaaaa agaaaagaaa ctgacaaaaa ctttctgag
540
gcctttgaag acctcagcaa actaatgatc aaggctaagg aaatggtgga attatcaaaa
600
tcaattgcta ataaaattaa agacaaacaa ggtgacatca cagaagatga gaccatcagg
660
tttaaatcct acttgctgag catgggaata gctaaccag ttaccagaga aacctacggc
720
tcaggcacac agtaccacat gcagctggcc aaacaactgg ctggaatatt gcagggtgcct
780
ttagaggaac gagggggaat aatgtcactc acggaggtgt actgcttagt aaaccgagct
840
cgaggaatgg aattgctctc accagaagat ttagtgaatg cgtgcaagat gctggaagca
900
ctgaaattac ctctcaggct ccgtgtgttt gacagtggcg tcatggtaat tgagcttcag
960
tctcacaagg aagaggaaat ggtggcctcg gccctggaga cagtttcaga aaagggatcc
1020
ctaaccatcag aagagtttgc taagcttggt ggaatgtctg tcctcctagc caaagaaagg
1080
ttgtctgctt cagagaagat gggccatctt tgccgtgatg actcagtgga aggcctgcgt
1140

<210> 5781
 <211> 845
 <212> DNA
 <213> Homo sapiens

<400> 5781
 ggggttccgt gccccaaaat cgaggagacc gtgggcttgg ggtccggatc ggggccgcgg
 60
 ggcgctggcg tgcggtgtca tttctgcggt gtaaagtctc ccaccttggc cgatttcaag
 120
 ccaccagggt aggatggcac tgcaacatct tccactgagg ctccagctgc cctctcaggt
 180
 acatcagggc ctggancgtc ctctcctcca ggagggccag gactcggccc cctgccagcc
 240
 cccgaagcat tgcagccagg agtgcagcgt gggggccctg caggccatgg ccaggcccca
 300
 gcgccaccag caccagggtca ggctggaagc cataggccag gggcagcacc aagcccaaga
 360
 tgcagctcag gaaaccaccg gtcactctg gcagtggcgt ggagacatgg aacatggata
 420
 gggcagccgc ctcttgccc ctgatgttca gccacagact cctcccgtca tgggcgaggt
 480
 ctggaggccg gtccagctgt cccagggccca cgcacagcag cctggaagaa gagctggcct
 540
 caggacaggt gttcatgttg tccagagtcc attcccagaa ctctctgtgc ttggccagcc
 600
 aggatagggg tgcccacagg tcttgccgtc agaggctcag gatggccaag tgaggcttac
 660
 ctctgggctc cgtgggacag gcctctccga acagccacat ccagggtggc tgctgcagca
 720
 gaggtctggag tggctgttat accactgttc acctgtggga tgaataaaca gtggagaatg
 780
 aggcaccaac caactcccaa gccaggtaaa cagatccaca gttcccttca ttcgggtgtg
 840
 ctctg
 845

<210> 5782
 <211> 147
 <212> PRT
 <213> Homo sapiens

<400> 5782
 Gly Val Pro Cys Pro Lys Ile. Glu Gly Ala Val Gly Leu Gly Ser Gly
 1 5 10 15
 Ser Arg Pro Arg Gly Ala Gly Val Arg Cys His Phe Cys Gly Val Asn
 20 25 30
 Ala Pro Thr Leu Ala Asp Phe Lys Pro Pro Gly Glu Asp Gly Thr Ala
 35 40 45
 Thr Ser Ser Thr Glu Ala Pro Ala Ala Leu Ser Gly Thr Ser Gly Pro
 50 55 60
 Gly Xaa Ser Ser Pro Pro Gly Gly Pro Gly Leu Gly Pro Leu Pro Ala
 65 70 75 80
 Pro Glu Ala Leu Gln Pro Gly Val Gln Arg Gly Gly Pro Ala Gly His

```
<210> 5779
<211> 371
<212> DNA
<213> Homo sapiens
```

```
<210> 5780
<211> 123
<212> PRT
<213> Homo sapiens
```

4944

tttctgaagg ctgtggaaga ggttgagtg ggcgcattctt agcttgcccc atccccattt
 480
 gaggtctgtc ggagctgccc ttcagtgtga gcatccacaa tgggtacccc agcctcgggtg
 540
 gtcagtgagc caccoccttg gcaggccccg attgaggccc ggggcccga gaggcctcg
 600
 gccaacatct tccaggacgc cgagctgctg cagatccaag ccctgtttca acgcagcggg
 660
 gaccagctgg ccgaggaacg ggcacagatc atctgggaat gtgcagggga ccaccgtgtg
 720
 gctgaggccc tcaagaggct gcgcaggaag agggccccc aa ggcagaaacc ccctggggca
 780
 ctgcgtacac cactgcagcc gcctcagaat cctggagccc cactctgcac tggccaaccc
 840
 acagagtgcc acagagacag cctccagtga gcagtatctg cactctagga agaaaagtgc
 900
 caggatccgc cggaactgga ggaagtcagg cccacaagc tacctccacc agatcagaca
 960
 ctgatccagg gaaagagcca ggaatggcag tgtcttccct cttgccaaaa ggctggggga
 1020
 ggtgaaggaa gagagacttt aggcaagcag cccaaagggg taaatgaaag caagaggctg
 1080
 ctgccactga cctgctccat tcagaacaag actggatgct tctgttgagc tctccattat
 1140
 gtgggaccca ttctcacca aaatgaggag agacagtgc tggtcctgcc acagtccttc
 1200
 ccagtctaac actattcctg ggctgcatga tattccctg ggagcaaagt gacaggcact
 1260
 tagatgcagc atttcaccac tcatgtact aatcatctac ctgctactac tgtaaacctat
 1320
 gggtccagca gcctgttcca cccccacac ccatcaggat agcacaggga aactgtagtt
 1380
 taagtggcaa ataaaaacat ttgcatcaaa aaaaaaaaaa aaaaaaaaaa a
 1431

<210> 5778

<211> 164

<212> PRT

<213> Homo sapiens

<400> 5778

Met Leu Thr Leu Lys Gly Ser Ser Asp Arg Pro Gln Met Gly Met Gly
 1 5 10 15
 Gln Ala Lys Met Arg Pro Leu Gln Pro Leu Pro Gln Pro Ser Glu Arg
 20 25 30
 Ala Gly Ala Ala Leu Gly Phe Leu Leu Arg Arg Cys Leu Gln Gly Pro
 35 40 45
 Val Gly Asp His Gly Gln His Lys Ser Met Ala Glu Gly Ile Leu Ala
 50 55 60
 Glu Val Leu Arg Arg His Leu Gln His Glu Glu Ala Pro Gly Leu Arg
 65 70 75 80
 Arg Gly Arg Phe Ala Glu Arg Arg Gly Pro Lys Trp Ile Trp Arg Ser
 85 90 95
 Arg Pro Ala Gly Thr Pro Ala Leu Thr Val Ala Leu Arg Leu Pro Pro


```

      100      105      110
Pro Glu Gly Ala Pro Glu Arg Ala Ala Glu Leu Gly Val Asn Phe Gly
      115      120      125
Arg Ser Arg Gln Gly Ser Ala Arg Gly Thr Lys Pro His Arg Cys Glu
      130      135      140
Ala Cys Gly Lys Ser Phe Lys Tyr Asn Ser Leu Leu Leu Lys His Gln
145      150      155      160
Arg Ile His Thr Gly Glu Lys Pro Tyr Ala Cys His Glu Cys Gly Lys
      165      170      175
Cys Phe Ala Ala Ala Ser Arg Phe Ile Gln His Gln Arg Ile His Ser
      180      185      190
Gly Glu Lys Pro Tyr Ala Cys Pro Glu Cys Ser Lys Thr Phe Thr Arg
      195      200      205
Ser Ser Asn Leu Ile Lys His Gln Val Ile His Ser Gly Glu Arg Pro
      210      215      220
Phe Ala Cys Gly Asp Cys Gly Lys Leu Phe Arg Arg Ser Phe Ala Leu
225      230      235      240
Leu Glu His Ala Arg Val His Ser Gly Glu Lys Pro Tyr Glu Cys Ser
      245      250      255
Asp Cys Gly Lys Cys Phe Arg Gly Arg Ser His Phe Phe Arg His Asn
      260      265      270
Arg Thr His Thr Gly Glu Lys Pro Tyr His Cys Leu Asp Cys Gly Lys
      275      280      285
Ser Phe Ser His Ser Ser His Leu Ile Lys His Gln Arg Thr His Arg
      290      295      300
Gly Val Arg Pro Tyr Ala Cys Pro Leu Cys Gly Lys Ser Phe Ser Arg
305      310      315      320
Arg Ser Asn Leu His Arg His Glu Lys Ile His Thr Thr Gly Pro Lys
      325      330      335
Ala Leu Ala Met Leu Met Leu Gly Ala Ala Ala Gly Ala Leu Ala
      340      345      350
Thr Pro Pro Pro Ala Pro Thr
      355

```

<210> 5777

<211> 1431

<212> DNA

<213> Homo sapiens

<400> 5777

ggaaggctcg cctgggagct catacctggc tggggccgag gattggctgt tccggggcta
60

gggagcgctt tctcccggga accgcggctg tgacccaagt ggcccggacc agtttggggc
120

tgcgtgcggc ctgcctcaag caaccaggta cgtaggtcgg cggcccagct cggcgctgcg
180

gtgggagccg gagggcgaca gtcagagccg gggtgccagc gggacgcgac cgccagatcc
240

acttaggacc ccgtcgttct gcgaagcggc cacgtctgag tcccggggcc tcctcgtgct
300

gcagatgtcg ccttaggacc tcggccagga taccctctgc catgctcttg tgctgcccg
360

gatcaccgac tggcccttgt aagcaccttc gcagcaggaa gccagagct gcgcctgcc
420

ctctgtgcagc aagcagcggc cgggcccag ggtgcgccc agcgggctgc cgagctggga
 540
 gtcaacttcg gtcggagccg gcagggcagc gcgcggggga ccaagccgca caggtgagag
 600
 gcctgcggca agagtttcaa gtataactcg ctgctcctga agcaccagcg catccacacg
 660
 ggcgagaagc cctacgcctg ccacgagtgc ggcaagtgtt tcgccgcagc ttcgcgcttc
 720
 atccagcacc agcgcacca cagcggcgag aagccctacg cctgccccga gtgcagcaag
 780
 accttcacgc gcagctccaa cctcatcaag caccaggtca tccacagcgg cgagcggccc
 840
 ttgcctgcg gcgactgcgg caaactgttc cgccgcagct tcgcgctcct ggagcacgag
 900
 cgctgcaca gggcgagaa gccctacgag tgctccgact gcggcaagtg cttccgcggc
 960
 cgctgcact tcttcggca caaccgcaca cacacggcg agaagcccta cactgcctc
 1020
 gactgcggca agagcttcag ccacagctcg cacctcatca agcaccagcg caccacccgt
 1080
 ggctgcggc cctacgcctg ccggttgtgt ggcaagagct tcagccggcg ctccaacctg
 1140
 caccggcacg agaagatcca caccaccggg cccaaggccc tggccatgct gatgctggg
 1200
 gcggcggcgg cgggggctct ggccacaccc ccaccgctc ccacctagga ggccaggaaa
 1260
 gggggagcgg ggcgcccagg gccactggaa cagccccact ggagtcaagg ctccgagggg
 1320
 ggagagaggg gctcggaag ggagctgggg cggtgagggc atggggtag gcattggcgat
 1380
 gggggagggc gagggcgaga aagggcaggc actctgcgaa ttaaaggcct tggacttgaa
 1440
 a
 1441

<210> 5776

<211> 359

<212> PRT

<213> Homo sapiens

<400> 5776

Met	Gly	Ile	Asn	Met	Pro	Lys	Val	Leu	Ser	Gln	Pro	Ser	Asp	Leu	Asp
1				5				10						15	
Leu	Gln	Asp	Val	Glu	Glu	Val	Glu	Ile	Gly	Arg	Asp	Thr	Phe	Trp	Pro
		20					25						30		
Asp	Ser	Glu	Pro	Lys	Pro	Glu	Gln	Ala	Pro	Arg	Ser	Pro	Gly	Ser	Gln
		35				40						45			
Ala	Pro	Asp	Glu	Gly	Ala	Gly	Gly	Ala	Leu	Arg	Thr	Ser	Val	Arg	Ser
		50				55					60				
Leu	Pro	Arg	Arg	Ala	Arg	Cys	Ser	Ala	Gly	Phe	Gly	Pro	Glu	Ser	Ser
		65			70				75				80		
Ala	Glu	Arg	Pro	Ala	Gly	Gln	Pro	Pro	Gly	Ala	Val	Pro	Cys	Ala	Gln
			85					90					95		
Pro	Arg	Gly	Ala	Trp	Arg	Val	Thr	Leu	Val	Gln	Gln	Ala	Ala	Ala	Gly

tcgggcgac ggtgagcaag cgcagcagcc tggacgagaa gcagaagcga gaggaggagg
 360
 agaagaaagc ggagttcgag cggcagcgaa aaattcgaca gcaagaaata gaagaaaaac
 420
 tcatcgagga agaaacagca cgaagagtag aagaattggt agcaanaaag ggtggaggaa
 480
 gaactggaga aaaggaagga tgaattgaa cgagaagttc tccgaagggt ggaggaagcc
 540
 aaacgcatca tggaaaagca gttgctcgaa gaactcgag
 579

<210> 5774

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5774

Xaa	Arg	Val	Arg	Gly	Leu	Arg	Arg	Ala	Val	Arg	Ala	Ser	Pro	Gly	Arg
1				5					10					15	
Met	Gly	Arg	Ser	Arg	Ser	Arg	Ser	Ser	Ser	Arg	Ser	Lys	His	Thr	Lys
			20					25					30		
Ser	Ser	Lys	His	Asn	Lys	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg
		35					40					45			
Asp	Lys	Glu	Arg	Val	Arg	Lys	Arg	Ser	Lys	Ser	Arg	Glu	Ser	Lys	Arg
	50					55					60				
Asn	Arg	Arg	Arg	Glu	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Thr	Asn	Thr	Ala
65				70					75					80	
Val	Ser	Arg	Arg	Glu	Arg	Asp	Arg	Glu	Arg	Pro	Arg	Pro	Arg	Pro	Thr
			85					90						95	
Ala	Ser	Thr	Ser	Ser	Gly	Ala	Arg								
			100												

<210> 5775

<211> 1441

<212> DNA

<213> Homo sapiens

<400> 5775

cgctctctc cgcctcggaa ggtcccaagg tgagacacct tcagcaggtc tcagggaaga
 60
 tggcagccct aggggacatt caggagtccc cttctgtccc gtccctgtc agtctctcat
 120
 caccggggac acctggaacc cagcaccacg agcctcagct tcacctccat gggcatcaac
 180
 atgcctaagg tgctctccca gccgtccgac ctggatctcc aagacgtaga ggaagtggag
 240
 atcggcagag acaccttctg gcccgactcc gagcccaagc cggagcaggc tccacgtctt
 300
 cctggctctc agggccctga cgagggggcg ggcggggcg tgcgcacctc cgtgaggagc
 360
 cttccccgca gggcccggtg cagcgccggc ttcgggctg aatccagcgc ggagcgccg
 420
 gcgggccagc cgctggggc cgtcccttgc gccagccgc ggggcgcctg gcgcgtgacg
 480

355	360	365
Thr Trp Glu Pro Pro Phe Ser Asp Glu Ser Cys Ser Pro Val Ser Cys		
370	375	380
Gly Lys Pro Glu Ser Pro Glu His Gly Phe Val Val Gly Ser Lys Tyr		
385	390	395
Thr Phe Glu Ser Thr Ile Ile Tyr Gln Cys Glu Pro Gly Tyr Glu Leu		400
	405	410
Glu Gly Asn Arg Glu Arg Val Cys Gln Glu Asn Arg Gln Trp Ser Gly		415
	420	425
Gly Val Ala Ile Cys Lys Glu Thr Arg Cys Glu Thr Pro Leu Glu Phe		430
	435	440
Leu Asn Gly Lys Ala Asp Ile Glu Asn Arg Thr Thr Gly Pro Asn Val		445
	450	455
Val Tyr Ser Cys Asn Arg Gly Tyr Ser Leu Glu Gly Pro Ser Glu Ala		460
	465	470
His Cys Thr Glu Asn Gly Thr Trp Ser His Pro Val Pro Leu Cys Lys		475
	485	490
Pro Asn Pro Cys Pro Val Pro Phe Val Ile Pro Glu Asn Ala Leu Leu		495
	500	505
Ser Glu Lys Glu Phe Tyr Val Asp Gln Asn Val Ser Ile Lys Cys Arg		510
	515	520
Glu Gly Phe Leu Leu Gln Gly His Gly Ile Ile Thr Cys Asn Pro Asp		525
	530	535
Glu Thr Trp Thr Gln Thr Ser Ala Lys Cys Glu Lys Ile Ser Cys Gly		540
	545	550
Pro Pro Ala His Val Glu Asn Ala Ile Ala Arg Gly Val His Tyr Gln		555
	565	570
Tyr Gly Asp Met Ile Thr Tyr Ser Cys Tyr Ser Gly Tyr Met Leu Glu		575
	580	585
Gly Phe Leu Arg Ser Val Cys Leu Glu Asn Gly Thr Trp Thr Ser Pro		590
	595	600
Pro Ile Cys Arg Ala Val Cys Arg Phe Pro Cys Gln Asn Gly Gly His		605
	610	615
Leu Pro Thr Pro Lys Cys Leu Phe Leu Ser Arg Gly Leu Asp Gly Ala		620
	625	630
Pro Leu		635
		640

<210> 5773

<211> 579

<212> DNA

<213> Homo sapiens

<400> 5773

nnacgcgtga ggggcctgag gcgagcgggt agagcgtctc ccggaaggat gggccgggtct
60

cgagaccgga gctcgtccc ctccaagcac accaagagca gcaagcacia caagaagcgc
120

agccgggtccc ggtcgcgata ccgggacaag gacgcggtgc ggaagcgttc caaatctcgg
180

gaaagtaaac ggaaccggcg gcgggagtcg cggtcccgtt cgcgctccac caacacggcc
240

gtgtcccggc gcgagcggga ccgggagcgc cctcgtcccc gccgaccgc atcgacatct
300

tgctactaaa taaaaaaaaa

2539

<210> 5772

<211> 642

<212> PRT

<213> Homo sapiens

<400> 5772

Tyr Thr Cys Asn Glu Gly Phe Leu Leu Glu Gly Ala Arg Ser Arg Val
 1 5 10 15
 Cys Leu Ala Asn Gly Ser Trp Ser Gly Ala Thr Pro Asp Cys Val Pro
 20 25 30
 Val Arg Cys Ala Thr Pro Pro Gln Leu Ala Asn Gly Val Thr Glu Gly
 35 40 45
 Leu Asp Tyr Gly Phe Met Lys Glu Val Thr Phe His Cys His Gly Leu
 50 55 60
 His Leu Ala Arg Cys Ser Lys Thr His Leu Ser Val Arg Gly Asn Trp
 65 70 75 80
 Asp Ala Glu Ile Pro Leu Cys Lys Pro Val Asn Cys Gly Pro Pro Glu
 85 90 95
 Asp Leu Ala His Gly Phe Pro Asn Gly Phe Ser Phe Ile His Gly Gly
 100 105 110
 His Ile Gln Tyr Gln Cys Phe Pro Gly Tyr Lys Leu His Gly Asn Ser
 115 120 125
 Ser Arg Arg Cys Leu Ser Asn Gly Ser Trp Ser Gly Ser Ser Pro Ser
 130 135 140
 Cys Leu Pro Cys Arg Cys Ser Thr Pro Val Ile Glu Tyr Gly Thr Val
 145 150 155 160
 Asn Gly Thr Asp Phe Asp Cys Gly Lys Ala Ala Arg Ile Gln Cys Phe
 165 170 175
 Lys Gly Phe Lys Leu Leu Gly Leu Ser Glu Ile Thr Cys Glu Ala Asp
 180 185 190
 Gly Gln Trp Ser Ser Gly Phe Pro His Cys Glu His Thr Ser Cys Gly
 195 200 205
 Ser Leu Pro Met Ile Pro Asn Ala Phe Ile Ser Glu Thr Ser Ser Trp
 210 215 220
 Lys Glu Asn Val Ile Thr Tyr Ser Cys Arg Ser Gly Tyr Val Ile Gln
 225 230 235 240
 Gly Ser Ser Asp Leu Ile Cys Thr Glu Lys Gly Val Trp Asn Gln Pro
 245 250 255
 Tyr Pro Val Cys Glu Pro Leu Ser Cys Gly Ser Pro Pro Ser Val Ala
 260 265 270
 Asn Ala Val Ala Thr Gly Glu Ala His Thr Tyr Glu Ser Glu Val Lys
 275 280 285
 Leu Arg Cys Leu Glu Gly Tyr Thr Met Asp Thr Asp Thr Asp Thr Ile
 290 295 300
 Thr Cys Gln Lys Asp Gly Arg Trp Phe Pro Glu Arg Ile Ser Cys Ser
 305 310 315 320
 Pro Lys Lys Cys Pro Leu Pro Glu Asn Ile Thr His Ile Leu Val His
 325 330 335
 Gly Asp Asp Phe Ser Val Asn Arg Gln Val Ser Val Ser Cys Ala Glu
 340 345 350
 Gly Tyr Thr Phe Glu Gly Val Asn Ile Ser Val Cys Gln Leu Asp Gly

gaaggttata cgatggatac agatacagat acaatcacct gtcagaaaaga tggtcgctgg
960
ttccctgaga gaatctcctg cagtcctaaa aaatgtcctc tcccggaaaa cataacacat
1020
atacttgtac atggggacga tttcagtgtg aataggcaag tttctgtgtc atgtgcagaa
1080
gggtatacct ttgaggaggt taacatatca gtatgtcagc ttgatggaac ctgggagcca
1140
ccattctccg atgaatcttg cagtccagtt tcttgtggga aacctgaaag tccagaacat
1200
ggatttgtgg ttggcagtaa atacaccttt gaaagcacia ttatttatca gtgtgagcct
1260
ggctatgaac tagaggggaa cagggaacgt gtctgccagg agaacagaca gtggagtggg
1320
ggggtggcaa tatgcaaaga gaccaggtgt gaaactccac ttgaatttct caatgggaaa
1380
gctgacattg aaaacaggac gactggaccc aacgtggtat attcctgcaa cagaggctac
1440
agtcttgaag ggccatctga ggcacactgc acagaaaatg gaacctggag ccaccagtc
1500
cctctctgca aaccaaattc atgccctgtt ccttttgtga tcccagaaa tgctctgtg
1560
tctgaaaagg agttttatgt tgatcagaat gtgtccatca aatgtaggga aggttttctg
1620
ctgcagggcc acggcatcat tacctgcaac cccgacgaga cgtggacaca gacaagcgc
1680
aaatgtgaaa aaatctcatg tggtcacca gctcacgtag aaaatgcaat tgctcgaggc
1740
gtacattatc aatatggaga catgatcacc tactcatgtt acagtggata catgttggag
1800
ggtttcctga ggagtgtttg tttagaaaat ggaacatgga catcacctcc tatttgaga
1860
gctgtctgtc gatttccatg tcagaatggg gggcatctgc caacgcccac atgcttgttc
1920
ctgtccagag ggctggatgg ggcgcctctg tgaagaacca atctgcattc ttccctgtct
1980
gaacggaggt cgtgtgttg ccccttacca gtgtgactgc ccgcctggct ggacggggtc
2040
tcgctgtcat acagctgttt gccagtctcc ctgcttaaat ggtggaaaat gtgtaagacc
2100
aaaccgatgt cactgtcttt cttcttggac gggacataac tgttccagga aaaggaggac
2160
tgggttttaa ccactgcacg accatctggc tctcccaaaa gcaggatcat ctctcctcg
2220
tagtgccctg gcatcctgga acttatgcaa agaaagtcca acatgggtgct gggctctgtt
2280
tagtaaaact gttacttggg gttacttttt ttattttgtg atatattttg ttattccttg
2340
tgacatactt tcttacatgt ttccattttt aaatatgcct gtattttcta tataaaaatt
2400
atattaaata gatgctgtct taccctcaca aaatgtacat attctgctgt ctattgggaa
2460
agttcctggg acacattttt attcagttac ttaaaatgat ttttccatta aagtatatt
2520

<211> 85
 <212> PRT
 <213> Homo sapiens

<400> 5770
 Leu Gln Thr Gln Leu Lys Glu Val Leu Arg Glu Asn Asp Leu Leu Arg
 1 5 10 15
 Lys Asp Val Glu Val Lys Glu Ser Lys Leu Ser Ser Ser Met Asn Ser
 20 25 30
 Ile Lys Ile Phe Trp Gly Pro Glu Leu Lys Lys Glu Arg Ala Leu Arg
 35 40 45
 Lys Asp Glu Ala Ser Lys Ile Pro Ile Trp Lys Glu Gln Tyr Arg Val
 50 55 60
 Val Gln Glu Glu Asn Gln Val Ser Ser Thr Cys Val Tyr Leu Tyr Trp
 65 70 75 80
 Leu Asn Ser Cys Ile
 85

<210> 5771
 <211> 2539
 <212> DNA
 <213> Homo sapiens

<400> 5771
 gtacacattc caaaaagaga ttgatacact tgcaatgaag gggtcttgct tgagggagcc
 60
 aggagtcggg ttgtcttgcc caatggaagt tggagtggag ccactcccgga ctgtgtgcct
 120
 gtcagatgtg ccaccccgcc acaactggcc aatgggggtga cggaaggcct ggactatggc
 180
 ttcatgaagg aagtaacatt ccactgtcat gggctacatc ttgcacggtg ctccaaaact
 240
 cacctgtcag tcagaggcaa ctgggatgca gagattcctc tctgtaaacc agtcaactgt
 300
 ggacctcctg aagatcttgc ccattggttc cctaattggtt ttctctttat tcatgggggc
 360
 catatacagt atcagtgtt tcttggttat aagctccatg gaaattcatc aagaagggtg
 420
 ctctccaatg gctcctggag tggcagctca ccttctgccc tgcttgcag atgttcaca
 480
 ccagtaattg aatatggaac tgtcaatggg acagattttg actgtggaaa ggcagcccgg
 540
 attcagtgtc tcaaaggctt caagctccta ggactttctg aaatcacctg tgaagccgat
 600
 ggccagtgga gctctgggtt ccccaactgt gaacacactt cttgtggttc tcttccaatg
 660
 ataccaaatg cgttcatcag tgagaccagc tcttggaagg aaaatgtgat aacttacagc
 720
 tgcaggctctg gatatgtcat acaaggcagt tcagatctga tttgtacaga gaaaggggta
 780
 tggaaccagc cttatccagt ctgtgagccc ttgtctgtg ggtccccacc gtctgtcgcc
 840
 aatgcagtgg caactggaga ggcacacacc tatgaaagtg aagtgaaact cagatgtctg
 900

130	135	140
Leu Thr Gly Gln Phe Cys Met Ile Gln Thr	Leu Lys Lys Gly Gln Thr	
145	150	155
Tyr Ala Ala Glu Asp Lys Thr Ser Val Asp Asp Arg Leu Ser Ile Leu		160
	165	170
Leu Lys Gly Lys Met Lys Val Ser Tyr Arg Gly His Phe Leu His Asn		175
	180	185
Ile Tyr Pro Cys Ala Phe Ile Asp Ser Pro Glu Phe Arg Ser Thr Gln		190
	195	200
Met His Lys Gly Glu Lys Phe Gln Val Thr Ile Ile Ala Asp Asp Asn		205
	210	215
Cys Arg Phe Leu Cys Trp Ser Arg Glu Arg Leu Thr Tyr Phe Leu Glu		220
225	230	235
Ser Glu Pro Phe Leu Tyr Glu Ile Phe Arg Tyr Leu Ile Gly Lys Asp		240
	245	250
Ile Thr Asn Lys Leu Tyr Ser Leu Asn Asp Pro Thr Leu Asn Asp Lys		255
	260	265
Lys Ala Lys Lys Leu Glu His Gln Leu Ser Leu Cys Thr Gln Ile Ser		270
	275	280
Met Leu Glu Met Arg Asn Ser Ile Ala Ser Ser Ser Asp Ser Asp Asp		285
	290	295
Gly Leu His Gln Phe Leu Arg Ser Thr Ser Ser Met Ser Ser Leu His		300
305	310	315
Val Ser Ser Pro His Gln Arg Ala Ser Ala Lys Met Lys Pro Ile Glu		320
	325	330
Glu Gly Ala Glu Asp Asp Asp Val Phe Glu Pro Ala Ser Pro Asn		335
	340	345
Thr Leu Lys Val His Gln Leu Pro		350
	355	360

<210> 5769

<211> 427

<212> DNA

<213> Homo sapiens

<400> 5769

gctagcagtg gggttgctag tgacaccata gcatttggag agcatcacct cctctctgtg

60

agtatggcat ccactgtacc tcaactccctt cgtcaggcga gagataacac aatcatggat

120

ctgcagacac agctgaagga agtattaaga gaaaatgatc tcttgcgga ggaatgtggaa

180

gtaaaggaga gcaaattgag ttcttcaatg aatagcatca agatcttctg gggcccagag

240

ctgaagaagg aacgagccct gagaaaggat gaagcttcca aaatcccat ttggaaggaa

300

cagtagagag ttgtacaaga ggaaaaccag gtaagttcta cgtgtgttta cctttatttg

360

ctgaattcat gtatataaat gaaatagcct tttttttccc ctttcttaga tttttccctt

420

cacgcgt

427

<210> 5770

aacatggaga tctgtgtgca gaggtgagc tgatgttcca gctttttggc tttcttatca
 1080
 ttttaagggtg gatcattcaa tgagtagagc ttatttgtga tgtcttttcc aataagatac
 1140
 ctaaagattt catacaagaa aggttctgat tccagaaagt atgttaatct ttctcttgac
 1200
 cagcataaaa atctgcagtt atcatctgca ataatgggtga cctggaattt ttcaccttg
 1260
 tgcattctgag ttgatctaaa ttcaggagaa tctataaagg cacaggggta aatggtatgc
 1320
 agaaaatgtc ctgatagga gaccttcatt tttcccttca agagaatact cagacgggtca
 1380
 tcaactgagg ttttatcttc tgcagcataa gtttggccct ttttcaagggt ttggatcatg
 1440
 caaaactgtc cagttagtct tctgaacaaa tctggaggca cacggagtgg ttcaaacaat
 1500
 cgccgggtaca tgccactgag ttccttttca atctttaccg gtctcttctt gtataaaaga
 1560
 tacgacagat gcaaaatgtt gacaccaag aacacagagt tccagatcat tatatccaag
 1620
 gcacatcggg agagagtggc ccagacgata taaagggtac atcctagagt taacattccc
 1680
 ctaagaaata tcatatgaag gtgaagagta gttggaataa ccaaccaac tgcaaaacaa
 1740
 atatttgcta catgaaaaac cagatgatgt atctctctcc agttttcaca agtgggtctta
 1800
 ttggaaggca caggtatgat acttttctaac tcaggtgtaa aacctatggc agttgattct
 1860
 ctcaatgggc tggactctgt ataattcatt ttgaaaatcc cggctgggtcc
 1910

<210> 5768

<211> 360

<212> PRT

<213> Homo sapiens

<400> 5768

Met	Asn	Tyr	Thr	Glu	Ser	Ser	Pro	Leu	Arg	Glu	Ser	Thr	Ala	Ile	Gly
1				5					10					15	
Phe	Thr	Pro	Glu	Leu	Glu	Ser	Ile	Ile	Pro	Val	Pro	Ser	Asn	Lys	Thr
			20					25					30		
Thr	Cys	Glu	Asn	Trp	Arg	Glu	Ile	His	His	Leu	Val	Phe	His	Val	Ala
			35				40					45			
Asn	Ile	Cys	Phe	Ala	Val	Gly	Leu	Val	Ile	Pro	Thr	Thr	Leu	His	Leu
			50				55				60				
His	Met	Ile	Phe	Leu	Arg	Gly	Met	Leu	Thr	Leu	Gly	Cys	Thr	Leu	Tyr
65					70				75					80	
Ile	Val	Trp	Ala	Thr	Leu	Tyr	Arg	Cys	Ala	Leu	Asp	Ile	Met	Ile	Trp
			85					90					95		
Asn	Ser	Val	Phe	Leu	Gly	Val	Asn	Ile	Leu	His	Leu	Ser	Tyr	Leu	Leu
			100					105					110		
Tyr	Lys	Lys	Arg	Pro	Val	Lys	Ile	Glu	Lys	Glu	Leu	Ser	Gly	Met	Tyr
			115				120					125			
Arg	Arg	Leu	Phe	Glu	Pro	Leu	Arg	Val	Pro	Pro	Asp	Leu	Phe	Arg	Arg

770 775 780
 Gly Arg Ala Pro Thr Leu Pro Gly Ser Ala Ala Thr Leu Gln Leu Asp
 785 790 795 800
 Gly Leu Ala Arg Ala Pro Gly Gln Pro Lys Ile Asp His Leu Arg Arg
 805 810 815
 Leu His Leu Gly Ala Cys Pro Thr Glu Glu Cys Lys Ala Cys Thr Arg
 820 825 830
 Cys Gly Cys Val Thr Met Leu Lys Ser Pro Asn Arg Thr Thr Ala Val
 835 840 845
 Lys Gln Trp Glu Gln Arg Trp Ile Lys Asn Cys Leu Cys Gly Gly Leu
 850 855 860
 Trp Trp Arg Val Pro Leu Ser Tyr Pro.
 865 870

<210> 5767

<211> 1910

<212> DNA

<213> Homo sapiens

<400> 5767

ggtagaaaaa tacacctatt aacaacatta gtaaacacca gaaaccatct aaaaggaatc
 60
 ttacatggg caagacgata tcctctctgt gagaccaca agtttggtt gagttactcc
 120
 tcagtatcgt gggttttgct gctattctga agggatcccc catcacgctg gcagctgtgt
 180
 gccaggagag accctgaggg ctgcctcacc acagcaggaa cgccttctc agtcccagcc
 240
 caatcctctc tcacactgcg gtgctctgtc cctatggaaa cagcctctgt atgtgtgtgt
 300
 gtgtgtgtgt gtgtgtgtgt gtgtgaataa tatatggaat aaagtttgag attccctgct
 360
 ttttcattgt accttagcct caattttaaa cttacattgt ttgttaaaat tatcaaattg
 420
 acaacctcat tgctatggaa caaaaaagac tgtgaggaaa aagaatcata acttggaaaa
 480
 aaataagtga aaaggcattg agagattgct aagatttggt aagttaaaac aataatatat
 540
 ctgaaaaaga ctgtgaaaat atatatctca aaagagaaca aggcatagtc agaaggctca
 600
 gtaaaacaat tactttaaaa gctgactaat aaaaagggtg agtgaaagaa ctcttccatc
 660
 cttgaccctt cctcacttcc tccctccgac tctaccagtc tggatgcact aaagcagaat
 720
 aacctaaaag ccatgaaaaa gtgctggtat ttttcaggat ctcttcaaga caccttccgt
 780
 cttggttaacc tgaattctct ctctgatcaa ggcagctgat ggactttcaa tgtatttgga
 840
 gatgccggtt caaaaacgtc atcatcatct tctgctcctt cttctatcgg tttcatcttg
 900
 gcagaggctc gctggtgtgg ggatgacaca tgaagagagg acatgctgga ggtactccga
 960
 agaaactggt gcaagccgct gtcactgtca ctggagctgg ctatactggt cctcatttcc
 1020

340 345 350
 Ala Val Ala Leu Pro Lys Leu Pro Ile Ser Leu Thr Asn Thr Asp Leu
 355 360 365
 Lys Val Ala Ser Asp Thr Gln Phe Tyr Pro Gly Leu Gly Leu Ala Leu
 370 375 380
 Ala Phe His Asp Gly Ser Val His Ile Val His Arg Leu Ser Leu Gln
 385 390 395 400
 Thr Met Ala Val Phe Tyr Ser Ser Ala Ala Pro Arg Pro Val Asp Glu
 405 410 415
 Pro Ala Met Lys Arg Pro Arg Thr Ala Gly Pro Ala Val His Leu Lys
 420 425 430
 Ala Met Gln Leu Ser Trp Thr Ser Leu Ala Leu Val Gly Ile Asp Ser
 435 440 445
 His Gly Lys Leu Ser Val Leu Arg Leu Ser Pro Ser Met Gly His Pro
 450 455 460
 Leu Glu Val Gly Leu Ala Leu Arg His Leu Leu Phe Leu Leu Glu Tyr
 465 470 475 480
 Cys Met Val Thr Gly Tyr Asp Trp Trp Asp Ile Leu Leu His Val Gln
 485 490 495
 Pro Ser Met Val Gln Ser Leu Val Glu Lys Leu His Glu Glu Tyr Thr
 500 505 510
 Arg Gln Thr Ala Ala Leu Gln Gln Val Leu Ser Thr Arg Ile Leu Ala
 515 520 525
 Met Lys Ala Ser Leu Cys Lys Leu Ser Pro Cys Thr Val Thr Arg Val
 530 535 540
 Cys Asp Tyr His Thr Lys Leu Phe Leu Ile Ala Ile Ser Ser Thr Leu
 545 550 555 560
 Lys Ser Leu Leu Arg Pro His Phe Leu Asn Thr Pro Asp Lys Ser Pro
 565 570 575
 Gly Asp Arg Leu Thr Glu Ile Cys Thr Lys Ile Thr Asp Val Asp Ile
 580 585 590
 Asp Lys Val Met Ile Asn Leu Lys Thr Glu Glu Phe Val Leu Asp Met
 595 600 605
 Thr His Cys Arg Arg Cys Ser Ser Ser Cys Ser Gly Trp Ala Thr Ser
 610 615 620
 Cys Cys Thr Cys Trp Pro Ala Tyr Pro Thr Ser Pro Ala Pro Pro Arg
 625 630 635 640
 Ser Pro Ala Pro Pro Arg Ser Pro Pro Pro Arg Ser Pro Pro Pro
 645 650 655
 Pro Arg Ser Pro Pro Leu His Glu Ala Ser Ala Gly Ser Leu Leu Arg
 660 665 670
 Pro Gly His Ser Phe Leu Arg Asp Gly Thr Ser Leu Gly Met Leu Arg
 675 680 685
 Glu Leu Met Val Val Ile Arg Ile Trp Gly Leu Leu Lys Pro Ser Cys
 690 695 700
 Leu Pro Val Tyr Thr Ala Thr Ser Asp Thr Gln Asp Ser Met Ser Leu
 705 710 715 720
 Leu Phe Arg Leu Leu Thr Lys Leu Trp Ile Cys Cys Arg Asp Glu Gly
 725 730 735
 Pro Ala Ser Glu Pro Asp Glu Ala Leu Val Asp Glu Cys Cys Leu Leu
 740 745 750
 Pro Ser Gln Leu Leu Ile Pro Ser Leu Asp Trp Leu Pro Ala Ser Asp
 755 760 765
 Gly Leu Val Ser Arg Leu Gln Pro Lys Gln Pro Leu Arg Leu Gln Phe

acaagcagcg gctgggaagg acaggtccaa taaacgccct ctgcgcccc aaaaaaaaaa
 3180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3220

<210> 5766
 <211> 873
 <212> PRT
 <213> Homo sapiens

<400> 5766
 Met Cys Asp Leu Arg Arg Pro Ala Ala Gly Gly Met Met Asp Leu Ala
 1 5 10 15
 Tyr Val Cys Glu Trp Glu Lys Trp Ser Lys Ser Thr His Cys Pro Ser
 20 25 30
 Val Pro Leu Ala Cys Ala Trp Ser Cys Arg Asn Leu Ile Ala Phe Thr
 35 40 45
 Met Asp Leu Arg Ser Asp Asp Gln Asp Leu Thr Arg Met Ile His Ile
 50 55 60
 Leu Asp Thr Glu His Pro Trp Asp Leu His Ser Ile Pro Ser Glu His
 65 70 75 80
 His Glu Ala Ile Thr Cys Leu Glu Trp Asp Gln Ser Gly Ser Arg Leu
 85 90 95
 Leu Ser Ala Asp Ala Asp Gly Gln Ile Lys Cys Trp Ser Met Ala Asp
 100 105 110
 His Leu Ala Asn Ser Trp Glu Ser Ser Val Gly Ser Leu Val Glu Gly
 115 120 125
 Asp Pro Ile Val Ala Leu Ser Trp Leu His Asn Gly Val Lys Leu Ala
 130 135 140
 Leu His Val Glu Lys Ser Gly Ala Ser Ser Phe Gly Glu Lys Phe Ser
 145 150 155 160
 Arg Val Lys Phe Ser Pro Ser Leu Thr Leu Phe Gly Gly Lys Pro Met
 165 170 175
 Glu Gly Trp Ile Ala Val Thr Val Ser Gly Leu Val Thr Val Ser Leu
 180 185 190
 Leu Lys Pro Ser Gly Gln Val Leu Thr Ser Thr Glu Ser Leu Cys Arg
 195 200 205
 Leu Arg Gly Arg Val Ala Leu Ala Asp Ile Ala Phe Thr Gly Gly Gly
 210 215 220
 Asn Ile Val Val Ala Thr Ala Asp Gly Ser Ser Ala Ser Pro Val Gln
 225 230 235 240
 Phe Tyr Lys Val Cys Val Ser Val Val Ser Glu Lys Cys Arg Ile Asp
 245 250 255
 Thr Glu Ile Leu Pro Ser Leu Phe Met Arg Cys Thr Thr Asp Leu Asn
 260 265 270
 Arg Lys Asp Lys Phe Pro Ala Ile Thr His Leu Lys Phe Leu Ala Arg
 275 280 285
 Asp Met Ser Glu Gln Val Leu Leu Cys Ala Ser Ser Gln Thr Ser Ser
 290 295 300
 Ile Val Glu Cys Trp Ser Leu Arg Lys Glu Gly Leu Pro Val Asn Asn
 305 310 315 320
 Ile Phe Gln Gln Ile Ser Pro Val Val Gly Asp Lys Gln Pro Thr Ile
 325 330 335
 Leu Lys Trp Arg Ile Leu Ser Ala Thr Asn Asp Leu Asp Arg Val Ser

ctccgcctct caccttccat gggccacccg ctggaggtgg ggctggcgct gcggcacctg
1560
ctcttctctg tggagtactg catggtgacc ggctacgact ggtgggacat cctgctgcac
1620
gtgcagccca gtatggtaca gagcctggtg gagaagctgc acgaggagta cacgcgccag
1680
accgctgccc tgcagcaggt cctctccacc cggatcctgg ccatgaaggc ctcgctctgc
1740
aagctgtcgc cctgcacggt gacccgcgtg tgcgactacc acaccaagct cttcctcatc
1800
gccatcagct ccacctgaa gtcgctgctg cgcacctact ttctcaacac gcctgacaag
1860
agccccggcg accggctgac cgagatctgc accaagatca ccgacgtcga cattgacaag
1920
gtcatgatca acctcaagac ggaggaatct gtgctggaca tgacacactg caggcgctgc
1980
agcagctctt gcagtgggtg ggcgactctg tgctgtacct gctggccagc ctaccaaac
2040
agccctgccc cacctcgag cctgccccca cctcgagacc ctccccacc tcggagccct
2100
ccccacctc ggagccctcc tctccatgaa gcctctgctg gttccctgct gaggccgggc
2160
cacagcttcc tgcgggacgg cacctcgtg ggcattgttc gggaattgat ggtggtcatc
2220
cgcattctgg gccttctgaa gccagctgc ctgcccgtgt atacggccac ctcggatacc
2280
caggacagca tgtccctgct cttccgctg ctcaccaagc tctggatctg ctgtcgcgat
2340
gagggccccag cgagcgagcc ggatgaggcg ctggtggatg aatgctgcct gctgcccagc
2400
cagctgctta tccccagcct ggactggctg ccagccagcg acggcctggt tagccgcctg
2460
cagcccaagc agccctctg tctgcagttt ggccgggcgc ccacgctgcc tggcagtgt
2520
gccaccctgc agctcgacgg cctcgccagg gcccaggcc agcccaagat cgaccacctg
2580
cggaggctgc accttggcgc ttgccccacg gaggaatgca aggcctgcac cagggtcggc
2640
tgtgtacca tgctcaagtc gcccaacaga accacggcgg tgaagcagtg ggagcagcg
2700
tggatcaaga actgcctgtg cgggtggctc tgggtggcgg tgcccctcag ctaccctga
2760
gccagctgc ccctcagcta ctctcagct acccctcagc tgcccctgag cccggtgct
2820
gcaagagcca ccgctcgccc tggactctcc tcggcgcggt taacctcagc ccgccctgca
2880
gggctgttga aggcctgagg ccggacgcct gcgtgaccag cagagcttct gaggaagccc
2940
ctgcctttgt ccagctgggc ccgcagtcca cacaccactc tcccaggacc ccagatccct
3000
ggaccatctg catccagagg accgtccgtg acggccgggg gtccaggcgg acctgtggt
3060
gacccggctc gggcgctctc tcggttctct tgectcacc gcggagagcg ctgaacctgg
3120

<212> DNA

<213> Homo sapiens

<400> 5765

cacgaggccc caccgctcag gcaactggtt gttaccgagg aagatggcgg cgccagaccc
60
gaggcgctag ggaagatcgc accgcggacg cccgctgagc ttggcgacg ggccgaccag
120
gagctggtga ctgccctcat gtgtgatttg cggcggccag cggcaggtgg gatgatggac
180
ttggcctacg tctgtgagtg ggagaaatgg tccaagagca ccactgccc atcggtgccc
240
ctggcctcgc cctggctcctg ccgaaatctc atcgccctca ccatggacct gcgcagcgat
300
gaccaggacc tgaccgcgat gatccacatc ctggacacgg agcaccctg ggacctgcac
360
tcgatccctc cagagcacca cgaggccatc acctgcctgg agtgggacca gtcaggctcc
420
cggctcctgt cagcagatgc cgacgggcag atcaagtgtt ggagcatggc ggaccacctg
480
gctaatagct gggagagctc agtgggcagc ctagtggagg gggaccccat tgtggccctg
540
tcctggctgc acaatggtgt gaaactggcc ctgcacgtgg agaagtcggg cgcctccagc
600
ttcggggaga agttctcccg agtcaagttc tcaccgtcgc tcacgtgtt cggcggcaag
660
cccatggagg gctggatcgc ggtgacggtc agcggcctgg tcaccgtgtc cctgctgaag
720
cccagcgggc aggtgctgac gtccaccgag agcctgtgcc ggctgcgcgg ccgctgggcc
780
ctggccgaca tcgccttcac cggcggcggc aacatcgtgg tggccacggc ggacggcagc
840
agcgcgtcgc ccgtgcagtt ctacaagggtg tgcgtgagcg tggtgagcga gaagtgccgt
900
atcgacacgg agatcctgcc ctccctgttc atgcgtgca ccaccgacct caaccgcaag
960
gacaagtttc ccgccatcac ccacctcaag ttcttgcccc gggacatgtc ggagcaggtg
1020
cttttgctgc cgtccagcca gaccagcagc atcgtggagt gctgggtccct gcgcaaggag
1080
ggactccccg tgaacaacat ctccagcag atctccccg tggttggcga caaacagccc
1140
acaattctca aatggcggat cctatcggcc accaacgac tggaccgtgt gtcggccgtg
1200
gcgctgccc agetgcccac ttcgctcacc aacaccgacc tcaagtggtg cagcgacaca
1260
cagttctacc ctggcctcgg gctggccctg gccttcacg acggcagcgt ccacatcgtg
1320
caccggctct cactgcagac catggcggtc ttctacagct ccgcggtccc gaggcctgtg
1380
gatgagccgg ccatgaagcg ccccgccacc gcgggccccg ccgtccactt aaaggctatg
1440
cagctatcgt ggacgtcact ggcctggtg gggattgaca gccacgggaa gctgagcgtg
1500

```

65          70          75          80
Asp Cys Pro Gly Cys Met His Thr Leu Ser Thr Arg Ala Thr Ser Ile
          85          90          95
Ser Thr Gln Leu Pro Asp Asp Pro Ala Lys Thr Thr Met Lys Lys Ala
          100          105          110
Tyr Tyr Leu Ala Cys Gly Phe Cys Arg Trp Thr Ser Arg Asp Val Gly
          115          120          125
Met Ala Asp Lys Ser Val Ala Ser Gly Gly Trp Gln Glu Pro Glu Asn
          130          135          140
Pro His Thr Gln Arg Met Asn Lys Leu Ile Glu Tyr Tyr Gln Gln Leu
          145          150          155          160
Ala Gln Lys Glu Lys Val Glu Arg Asp Arg Lys Lys Leu Ala Arg Arg
          165          170          175
Arg Asn Tyr Met Pro Leu Ala Phe Ser Asp Lys Tyr Gly Leu Gly Thr
          180          185          190
Arg Leu Gln Arg Pro Arg Ala Gly Ala Ser Ile Ser Thr Leu Ala Gly
          195          200          205
Leu Ser Leu Lys Glu Gly Glu Asp Gln Lys Glu Val Lys Ile Glu Pro
          210          215          220
Ala Gln Ala Val Asp Glu Val Glu Pro Leu Pro Glu Asp Tyr Tyr Thr
          225          230          235          240
Arg Pro Val Asn Leu Thr Glu Val Thr Thr Leu Gln Gln Arg Leu Leu
          245          250          255
Gln Pro Asp Phe Gln Pro Val Cys Ala Ser Gln Leu Tyr Pro Arg His
          260          265          270
Lys His Leu Leu Ile Lys Arg Ser Leu Arg Cys Arg Lys Cys Glu His
          275          280          285
Asn Leu Ser Lys Pro Glu Phe Asn Pro Thr Ser Ile Lys Phe Lys Ile
          290          295          300
Gln Leu Val Ala Val Asn Tyr Ile Pro Glu Val Arg Ile Met Ser Ile
          305          310          315          320
Pro Asn Leu Arg Tyr Met Lys Glu Ser Gln Val Leu Leu Thr Leu Thr
          325          330          335
Asn Pro Val Glu Asn Leu Thr His Val Thr Leu Phe Glu Cys Glu Glu
          340          345          350
Gly Asp Pro Asp Asp Ile Asn Ser Thr Ala Lys Val Val Val Pro Pro
          355          360          365
Lys Glu Leu Val Leu Ala Gly Lys Asp Ala Ala Ala Glu Tyr Asp Glu
          370          375          380
Leu Ala Glu Pro Gln Asp Phe Gln Asp Asp Pro Asp Ile Ile Ala Phe
          385          390          395          400
Arg Lys Ala Asn Lys Val Gly Ile Phe Ile Lys Val Thr Pro Gln Arg
          405          410          415
Glu Glu Gly Glu Val Thr Val Cys Phe Lys Met Lys His Asp Phe Lys
          420          425          430
Asn Leu Ala Ala Pro Ile Arg Pro Ile Glu Glu Ser Asp Gln Gly Thr
          435          440          445
Glu Val Ile Trp Leu Thr Gln His Val Glu Leu Ser Leu Gly Pro Leu
          450          455          460
Leu Pro
465

```

<210> 5765

<211> 3220

ttgaggaaaa tacagatttt ttgtttacct tggctctggt ttaagtctta aaaaattaaa
 2760
 gataacatta taatgtagaa tacagatggg acatagtcct tgtaagcttc ccttgaaaat
 2820
 gtttttaaata tttaggaagc ttttaaaaga cactaaattg tactctaaaa gacactaaat
 2880
 tgtactaatt gtacaaaggt caagccaatt ttatgaaaca gtcctacaga gtaatatatg
 2940
 tgatgcagtg taagaaggaa aatactcatc tctaacatta tggtaataac atttagcctc
 3000
 ttaggagttg gagcaggggg atgggtaatt acagatttgc agactataga aagagtttca
 3060
 tttttttgtg accccacaga gtctcaaatt tttatttcac tacctgctag agcctactgt
 3120
 gaaatcactg ctccatattt gccagtggag gaaatgggca tagagtagag aatagcttca
 3180
 tatgtttaca cgtttgcata gactacacac atgtcatgcy tttatggcag gtagctggta
 3240
 tttattcccc aaagtaataa tggtgaagta tgggtctcat cattcccata cacagaaaca
 3300
 caaacactt tgatcataaa cttttttctt cagaagccaa actaacttgc agaataatag
 3360
 agccactggt ttaatgtttc ctcaagatag gttttagtgt aagctagtat tctgtgtggt
 3420
 cgtagaaatg attcaatacc tgcagctggt gaattaggaa ttgtatttgt tgcctttttt
 3480
 atattagatg aggtgcaaaa attttaatgc tagtcagtat gcaccaccac aggaaagtta
 3540
 gatcccata gcaattgaaa ctacagcttt ggaaacttag gctaagttaa tttggatttg
 3600
 ttacttgatt cacctactga ccttttcttt tgtttgaagt gcttatcagc ataatgagct
 3660
 aagtgtcatg catatttgtg aagaaacacc ctttttggtc ccttttgga cagagaggta
 3720
 ctcttgatc tttatgaatg acaggttact gttttgcctt attgcttaac ttaatgtagt
 3780
 gaaataaagc agacaaagct tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3840

<210> 5764

<211> 466

<212> PRT

<213> Homo sapiens

<400> 5764

Xaa	Pro	Pro	Leu	Pro	Lys	Met	Ala	Ser	Leu	Leu	Gln	Ser	Asp	Arg	Val
1				5					10					15	
Leu	Tyr	Leu	Val	Gln	Gly	Glu	Lys	Lys	Val	Arg	Ala	Pro	Leu	Ser	Gln
			20					25					30		
Leu	Tyr	Phe	Cys	Arg	Tyr	Cys	Ser	Glu	Leu	Arg	Ser	Leu	Glu	Cys	Val
		35				40					45				
Ser	His	Glu	Val	Asp	Ser	His	Tyr	Cys	Pro	Ser	Cys	Leu	Glu	Asn	Met
	50					55					60				
Pro	Ser	Ala	Glu	Ala	Lys	Leu	Lys	Lys	Asn	Arg	Cys	Ala	Asn	Cys	Phe

actgctaagg tgggtggcgcc tcccaaagag ctcgtttttag ctggcaagga tgcagcagca
1140
gagtacgatg agttggcaga acctcaagac tticaggacg atcctgacat tatagccttc
1200
agaaaggcca acaaagtggg tattttcatc aaagttacac cacagcgtga ggaggggtgaa
1260
gtgaccgtgt gcttcaagat gaagcatgat tttaaaaacc tggcagcccc cattcgcccc
1320
attgaagaaa gtgaccaggg aacagaagtc atctggctca cccagcatgt ggaacttagc
1380
ttggggccac ttcttcctta aaagggtcca ctggagggca gatcccaaag gacagtatca
1440
ccgtaaacct gcgttaaaat gtggaagctg ctgcttcatt aggccttggt tataacgatg
1500
tacctatgca ctacggaatt ctattgctaa gaaagtggga gcataggcaa ggcattggga
1560
acacagggta gctgctggtg ctcttgctct caccctggt gacaccagta agtctgtgtc
1620
tccctcactg aaccctgcac gttgagtaac agcagcataa ttccatccta ggaaagggga
1680
tgggtgttcc ttggaatggc attgtattta ccacctgaga aactctgtac tgtctcttga
1740
tctgatctca ctaaggatca caatgtcaca gatgaaactt aaatgataac ccaaaggtag
1800
acctgctggt aatgatccag cattgggtcac aatgtaccaa ctgctttctg cattccgtta
1860
aatacatctt aacagtctaa aacatatccc ttcattgcca taatggctgc ctttttgcca
1920
tagatttcca tataactgaa aaactgaatt gtcactttat cttagtatc atgatgattg
1980
gaaaaacctg tgaagtgtt aaggcaactc catttgccct ctttttctaa gtgaatacag
2040
gacacgtatt agttgttctt aatttttttc ccagtaaaat atggatcttt taagaagaat
2100
ttgagaagca aacaattaca tgtcatgtca agggggtagc agattccatt cgttttcaat
2160
attgccacaa taccagggga ttaatgctgc cacagggggg caatctttat ttgtcttact
2220
tcctacccct tcctgttct gcctctttaa ctcatgtaag ttgttctggt tgggacctgg
2280
aaaagaaccc aaagaaaacc tgagtggaca gggttcatttc tggaatgcag aaaacatttt
2340
aaaggctaga tttttagaat attctcaact agcattcttt ccattgattt gaaggggaaa
2400
ttaactatta taatctcttg aatccaaaac tggatattaa gaactttccc cttactaag
2460
tttaagactt ttgtcatgtg gtgagtcaaa taagaccatt ttgattgtaa accataaaat
2520
agttcagcaa gtagccaca gttctggcct aacagcagac ttgctgtttt cacttggtat
2580
cctggagttg gggtgctaac cttaatctt atgatgtttt ctaaaatgaa acttgataaa
2640
gtagaccacc agctgcaccg tgttttctgt aaaagtattg ttagtaagtg gccaagagac
2700

```

<400> 5763
nctcctcccc tccccaagat ggcgtccttg ctgcagtcgg accgggttct ctatctagtc
60
cagggagaaa agaaggttcg ggccccgctc tcgcaactct acttctgccg ctattgtagc
120
gaactgcggt cgctggaatg tgtgtctcac gaggtggact ccattattg tcccagttgt
180
ttagaaaata tgccatcggc tgaagccaaa ctaaaaaaga atagatgtgc caattgtttt
240
gactgtcctg gctgcatgca caccctctct actcggggcca cgagcatctc cacacagctt
300
ccagatgacc cagccaagac caccatgaag aaagcctatt acctggcatg tggattttgt
360
cgctggacgt ctagagatgt gggcatggca gacaaatctg tagctagtg cggttggcag
420
gaacctgaaa atcctcacac acaacggatg aacaaattga ttgaatatta ccagcagctt
480
gtcagaaaag agaaggttga gcgagatcgc aagaaactgg cacgacgtag aaactatatg
540
cctctggctt ttctggaçaa atatggtctt ggaaccaggc ttcagcgacc acgagctggt
600
gcatccatca gtacccttgc cggactttcc cttaaagaag gagaggatca gaaagaggta
660
aagattgagc cagctcaggc tgtggatgaa gtggaacctc tacctgaaga ctattataca
720
agaccagtaa atttaacaga ggtaacaacc cttcagcagc gtctgttaca gctgacttc
780
cagccagtct gtgcttcaca gctctatcct cgccacaaac atcttctgat caaacggctc
840
ctgcgctgcc gtaaattgtg acataatttg agcaagccag aatttaaacc aacgtcaatc
900
aaattcaaaa tccagctggt cgctgtcaat tatattccag aagtgagaat catgtcaatt
960
cccaaccttc gctacatgaa ggagagccag gtctctctga ctcttacaaa tccagttgag
1020
aacctcacc atgtgactct cttcgagtgt gaggaggggg accctgatga tatcaacagc
1080

```

aaggagcagg cccagacag tgtggagggg ctgctaaatg ccctcaggtt cactacaaag
1080
cacttgaacg atgaatcaac ttccaaacag attcgagcaa tgcttcagta gagctctgct
1140
caaagaagag gatctatgtg ctgacctcag aagatgtata tgtttacata atttaataca
1200
gattgatgtt aatacttgtg tatttacata accgtttcct tcttgtcact gaaatatatg
1260
gaccttaatt tgtatcctga ctgactcaac ccagcagagc ataaattgac ttgagagcct
1320
tacctttgat gtctgaaatg aaacccccctt ctccaaaggc aaaattcgga gactttgatc
1380
tttgctactg gagtccttta acaacaccta taacgataaa aaattcctaa ttgtttgtgg
1440
tagtaaaaaa aa
1452

<210> 5762

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5762

Ile	Thr	Gly	Asp	Ile	Ser	Arg	Phe	Ala	Gly	Met	Gly	Asn	Leu	Leu	Lys
1			5						10					15	
Val	Leu	Thr	Arg	Glu	Ile	Glu	Asn	Tyr	Pro	His	Phe	Phe	Leu	Asp	Phe
		20					25						30		
Glu	Asn	Ala	Gln	Pro	Thr	Glu	Gly	Glu	Arg	Glu	Ile	Trp	Asn	Gln	Ile
		35					40					45			
Ser	Ala	Val	Leu	Gln	Asp	Ser	Glu	Ser	Ile	Leu	Ala	Asp	Leu	Gln	Ala
	50				55					60					
Tyr	Lys	Gly	Ala	Gly	Pro	Glu	Ile	Arg	Asp	Ala	Ile	Gln	Asn	Pro	Asn
65					70				75					80	
Asp	Ile	Gln	Leu	Gln	Glu	Lys	Ala	Trp	Asn	Ala	Val	Cys	Pro	Leu	Val
			85						90					95	
Val	Arg	Leu	Lys	Arg	Phe	Tyr	Glu	Phe	Ser	Ile	Arg	Leu	Glu	Lys	Ala
		100					105						110		
Leu	Gln	Ser	Leu	Leu	Glu	Ser	Leu	Thr	Cys	Pro	Pro	Tyr	Thr	Pro	Thr
		115					120					125			
Gln	His	Leu	Glu	Arg	Glu	Gln	Ala	Leu	Ala	Lys	Glu	Phe	Ala	Glu	Ile
		130					135				140				
Leu	His	Phe	Thr	Leu	Arg	Phe	Asp	Glu	Leu	Lys	Met	Arg	Asn	Pro	Ala
145					150				155					160	
Ile	Gln	Asn	Asp	Phe	Ser	Tyr	Tyr	Arg	Arg	Thr	Ile	Ser	Arg	Asn	Arg
			165						170					175	
Ile	Asn	Asn	Met	His	Leu	Asp	Ile	Glu	Asn	Glu	Val	Asn	Asn	Glu	Met
		180						185					190		
Ala	Asn	Arg	Met	Ser	Leu	Phe	Tyr	Ala	Glu	Ala	Thr	Pro	Met	Leu	Lys
		195					200					205			
Thr	Leu	Ser	Asn	Ala	Thr	Met	His	Phe	Val	Ser	Glu	Asn	Lys	Thr	Leu
	210					215					220				
Pro	Ile	Glu	Asn	Thr	Thr	Asp	Cys	Leu	Ser	Thr	Met	Thr	Ser	Val	Cys
225					230					235				240	
Lys	Val	Met	Leu	Glu	Thr	Pro	Glu	Tyr	Arg	Ser	Arg	Phe	Thr	Ser	Glu

<400> 5761
nnaccatctt aaggacagaa aagctacagg actctaggag gccaccgtcc tgatttggga
60
agtccaactt actttggcca gacagcagct aagctgggtc atcccatcag cctggattgg
120
tgaaactgaa tcacaggaga tatttccagg ttgtctggga tgggaaacct gctcaaagtc
180
cttaccaggg aaattgaaaa ctatccacac tttttcctgg attttgaaaa tgctcagcct
240
acagaaggag agagagaaat ctggaaccag atcagcgccg tccttcagga ttctgagagc
300
atccttgtag acctgcaggc ttacaaaggc gcaggcccag agatccgaga tgcaattcaa
360
aatcccaatg acattcagct tcaagaaaaa gcttggaatg cggtgtgccc tcttgttgtg
420
aggctaaaaga gattttacga gttttccatt agactagaaa aagctcttca gagtttattg
480
gaatctctga cttgtccacc ctacacacca acccaacacc tggaaaggga acaggccctg
540
gcaaaggagt ttgccgaaat ttacatttt acccttcgat tcgatgagct gaagatgagg
600
aacccggcta ttcagaatga cttcagctac tacagaagaa caatcagtcg caaccgcata
660
aacaacatgc acctagacat tgagaatgaa gtcaataatg agatggccaa tcgaatgtcc
720
ctcttctatg cagaagccac gccaatgctg aaaaccctta gcaatgccac aatgcacttt
780
gtctctgaaa acaaaaactct gccaatagag aacaccacag actgcctcag cacaatgaca
840
agtgtctgta aagtcattgct ggaaactccg gagtacagaa gtagggtttac gagtgaagag
900
accctgatgt tctgcatgag ggtgatggtg ggagtcatca tcctctatga ccatgtccac
960
cctgtgggag ctttctgcaa gacatccaag atcgatatga aaggctgcat aaaagttttg
1020

cgactcattg agcaggcaaa aggcaggatt gtggtaatgc caggaggtgg tataacagac
 720
 agaaatctac aaaggatcct tgagggttca ggtgctacag aattccactg ttctgctcgg
 780
 tctactagag actcggaat gaagtttcga aattcatctg ttgccatggg agcctcactt
 840
 tcttgctcag aatattccct aaaggtaaca gatgtgacca aagtaaggac tttgaatgct
 900
 atcgcaaaga acatcctggg gtagccagac ctctctgaga gacatggata tcacaggatg
 960
 aaggtagaac tataatctgc aattctctat gacacagctt taaccttctt ctctggccag
 1020
 gacagtcgca atctttgttt taagtttcac atggccatgg agaatgtgcc caagaagaaa
 1080
 aagaatttga aacagagata cagtcacttc ctttgcttag tcttaccagt gattgtcatc
 1140
 atgggttaaag ctggtctgtg cttcttccat agacagaagc ttagtctgtt ttcagtggaa
 1200
 ttaattgatg aactgggaaa attttaactg catggtatga attcagagtg tgacttaagg
 1260
 gtcaattcaa agcagtattt tgacttttca tttgtaaaat aaaaatttcc actattaaaa
 1320
 aaaaaaaaaa aaa
 1333

<210> 5760

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5760

Met	Lys	Arg	Gln	Gly	Ala	Ser	Ser	Glu	Arg	Lys	Arg	Ala	Arg	Ile	Pro
1				5				10						15	
Ser	Gly	Lys	Ala	Gly	Ala	Ala	Asn	Gly	Phe	Leu	Met	Glu	Val	Cys	Val
			20				25						30		
Asp	Ser	Val	Glu	Ser	Ala	Val	Asn	Ala	Glu	Arg	Gly	Gly	Ala	Asp	Arg
		35					40					45			
Ile	Glu	Leu	Cys	Ser	Gly	Leu	Ser	Glu	Gly	Gly	Thr	Thr	Pro	Ser	Met
	50					55					60				
Gly	Val	Leu	Gln	Val	Val	Lys	Gln	Ser	Val	Gln	Ile	Pro	Val	Phe	Val
65					70				75					80	
Met	Ile	Arg	Pro	Arg	Gly	Gly	Asp	Phe	Leu	Tyr	Ser	Asp	Arg	Glu	Ile
			85					90					95		
Glu	Val	Met	Lys	Ala	Asp	Ile	Arg	Leu	Ala	Lys	Leu	Tyr	Gly	Ala	Asp
		100						105					110		
Gly	Leu	Val	Phe	Gly	Ala	Leu	Thr	Glu	Asp	Gly	His	Ile	Asp	Lys	Glu
		115					120					125			
Leu	Cys	Met	Ser	Leu	Met	Ala	Ile	Cys	Arg	Pro	Leu	Pro	Val	Thr	Phe
	130					135					140				
His	Arg	Ala	Phe	Asp	Met	Val	His	Asp	Pro	Met	Ala	Ala	Leu	Glu	Thr
145					150					155				160	
Leu	Leu	Thr	Leu	Gly	Phe	Glu	Arg	Val	Leu	Thr	Ser	Gly	Cys	Asp	Ser
				165					170				175		
Ser	Ala	Leu	Glu	Gly	Leu	Pro	Leu	Ile	Lys	Arg	Leu	Ile	Glu	Gln	Ala

245 250 255
 Ala Arg Gly Leu Leu Asp Arg Ser Phe Ala Asn Met Ala Glu Pro Phe
 260 265 270
 Lys Val Trp Thr Glu Asn Ala Asp Gly Ser Gly Ala Val Asn Phe Leu
 275 280 285
 Thr Gly Met Gly Gly Phe Leu Gln Ala Val Val Phe Gly Cys Thr Gly
 290 295 300
 Phe Arg Val Thr Arg Ala Gly Val Thr Phe Asp Pro Val Cys Leu Ser
 305 310 315 320
 Gly Ile Ser Arg Val Ser Val Ser Gly Ile Phe Tyr Gln Gly Asn Lys
 325 330 335
 Leu Asn Phe Ser Phe Ser Glu Asp Ser Val Thr Val Glu Val Thr Ala
 340 345 350
 Arg Ala Gly Pro Trp Ala Pro His Leu Glu Ala Glu Leu Trp Pro Ser
 355 360 365
 Gln Ser Arg Leu Ser Leu Leu Pro Gly His Lys Val Ser Phe Pro Arg
 370 375 380
 Ser Ala Gly Arg Ile Gln Met Ser Pro Pro Lys Leu Pro Gly Ser Ser
 385 390 395 400
 Ser Ser Glu Phe Pro Gly Arg Thr Phe Ser Asp Val Arg Asp Pro Leu
 405 410 415
 Gln Ser Pro Leu Trp Val Thr Leu Gly Ser Ser Ser Pro Thr Glu Ser
 420 425 430
 Leu Thr Val Asp Pro Ala Ser Glu
 435 440

<210> 5759

<211> 1333

<212> DNA

<213> Homo sapiens

<400> 5759

cgacaggcgc cgcgcagtgt tgacgcgctt cttagctggt gcgcgccgga gcccaaattc
 60
 caagtggaaa ctgcaggcgc acgagggagg aacgcgtgga gcatgaaaag gcagggggcc
 120
 tcctctgagc gaaaacgagc gcggataccg tccgggaagg ccggagcagc aaatggattt
 180
 ctcatggaag tttgtgttga ttcagtggaa tcagctgtga atgcagaaag aggaggtgct
 240
 gatcggattg aattatgttc tggtttatca gaggggggaa ctacaccag catgggtgtc
 300
 cttcaagtag tgaagcagag tggtcagatc ccagtttttg tgatgattcg gccacgggga
 360
 ggtgattttt tgtattcaga tcgtgaaatt gaggtgatga aggctgacat tcgtcttgcc
 420
 aagctttatg gtgctgatgg tttggttttt ggggcattga ctgaagatgg acacattgac
 480
 aaagagctgt gtatgtccct tatggctatt tgccgcctc tgccagtcac tttccaccga
 540
 gcctttgaca tgggtcatga tccaatggca gctctggaga ccctcttaac cttgggattt
 600
 gaacgcgtgt tgaccagtgg atgtgacagt tcagcattag aagggtacc cctaataaag
 660

tcagagacgt ctcttgggcc ttccctcttg ccacgtctgc acccaccctt cctgggcacc
 1980
 ctcttagcct gccatccctc acctgcagcc aggtcttcag ggaaggtcca tgctgcttgg
 2040
 cctgagttca aggctttctg cctgtagcct ggactcccgt ggacccccgt gggcaggtgg
 2100
 cttccccgtg gcattctccac accgcctctg cctgcccctg tggactgatg ctatcgcgca
 2160
 cgggtcccacg accccacccc gagctcctga agccgggggc tgagcctgca tcacctctgg
 2220
 cctctcatcc cccactctcc tgagagcagt ggtcacagcg gccggccgct ctgctgagaa
 2280
 ggcagagagg caggctcagg cctcagcgtg gacagcaggg ataaggggca cgaaggacgg
 2340
 ggactcggcc ccttcagaat tc
 2362

<210> 5758

<211> 440

<212> PRT

<213> Homo sapiens

<400> 5758

Gly	Pro	Cys	Ser	Gln	Asp	Leu	Trp	Met	Phe	Pro	Ser	Ile	Leu	Met	Phe
1				5					10					15	
His	Pro	Glu	Ala	Ala	Arg	Ala	Ile	Leu	Glu	Tyr	Arg	Ile	Arg	Thr	Leu
		20						25					30		
Asp	Gly	Ala	Leu	Glu	Asn	Ala	Gln	Asn	Leu	Gly	Tyr	Gln	Gly	Ala	Lys
		35					40					45			
Phe	Ala	Trp	Glu	Ser	Ala	Asp	Ser	Gly	Leu	Glu	Val	Cys	Pro	Glu	Asp
		50				55					60				
Ile	Tyr	Gly	Val	Gln	Glu	Val	His	Val	Asn	Gly	Ala	Val	Val	Leu	Ala
65					70					75				80	
Phe	Glu	Leu	Tyr	Tyr	His	Thr	Thr	Gln	Asp	Leu	Gln	Leu	Phe	Arg	Glu
				85					90					95	
Gly	Gly	Gly	Trp	Glu	Val	Val	Arg	Ala	Val	Ala	Lys	Phe	Trp	Cys	Ser
			100					105					110		
Arg	Val	Glu	Trp	Ser	Pro	Arg	Glu	Lys	Tyr	His	Leu	Arg	Gly	Val	
		115					120				125				
Met	Ser	Pro	Asp	Glu	Tyr	His	Ser	Gly	Val	Asn	Asn	Ser	Val	Tyr	Thr
		130				135					140				
Asn	Val	Leu	Val	Gln	Asn	Ser	Leu	Arg	Phe	Ala	Ala	Ala	Leu	Ala	Gln
145					150					155				160	
Asp	Leu	Gly	Leu	Pro	Ile	Pro	Ser	Gln	Trp	Leu	Ala	Val	Ala	Asp	Lys
				165				170						175	
Ile	Lys	Val	Pro	Phe	Asp	Val	Glu	Gln	Asn	Phe	His	Pro	Glu	Phe	Asp
			180					185					190		
Gly	Tyr	Glu	Pro	Gly	Glu	Val	Val	Lys	Gln	Ala	Asp	Val	Val	Leu	Leu
		195					200					205			
Gly	Tyr	Pro	Val	Pro	Phe	Ser	Leu	Ser	Pro	Asp	Val	Arg	Arg	Lys	Asn
		210					215				220				
Leu	Glu	Ile	Tyr	Glu	Ala	Val	Thr	Ser	Pro	Gln	Gly	Pro	Ala	Met	Thr
225					230					235				240	
Trp	Ser	Met	Phe	Ala	Val	Gly	Trp	Met	Glu	Leu	Lys	Asp	Ala	Val	Arg

gagtcattca ctgccagcct gaagctgccc atgcgcata tgggctgga gcctctgagg
360
ccacacaaac gccggctggg gaggcgaagt gtggggctga gcaccagaac tccaggagcg
420
tctgggctgg agacagaact ggggtgggcag gtggggaggg cctgcagatc tgagtgggca
480
gccgaggagg aacccagaag acgccagcga tggagctctg ccggggcgga atgtggccag
540
gagggggcggg agcagtgcg gcctgtccgg cgctagaact agggaccgtg ctctcaggac
600
ctctggatgt tcccagatat cctgatgttc caccagaag ccgccagggc catcctggag
660
taccgcatcc gcacgctgga cggggccctg gagaacgccc agaacctggg ctaccaggga
720
gccaaagtttg cctgggagag tgcagactcc ggcttagagg tttgccctga ggacatttac
780
ggagtccagg aggtccacgt caacggggcc gtggtgttg ccttcgagct gtactaccat
840
accacccagg acctgcagct atttcgagag ggtgggtggg gggagggtgt tagggctgtg
900
gcgaagtttt ggtgcagtcg tgttgagtgg agccccaggg aggaaaagta ccacctgagg
960
ggagtcatgt cccccgacga gtaccattca ggggtcaaca actctgtgta caccaacgtc
1020
ctgggtccaga acagcctgcg ctttgctgct gccctggccc aggacctggg tcttcccatc
1080
cccagccagt ggctggcggg ggctgacaag atcaaggtag cctttgacgt ggagcagaac
1140
ttccaccggg agttcgatgg gtatgagcct ggagagggtg tgaagcaggc agacgtcgtg
1200
ctcctgggat acccagtcct cttctccctg agtctgatg ttcgcaggaa aaatctggag
1260
atttacgagg ctgtgacgtc cccccagggc ccgcacatga cctggagcat gtttgctgtg
1320
ggctggatgg agctgaagga cgcagtgcgg gcccggggcc tcttgacag gagctttgcc
1380
aacatggctg aacccttcaa ggtgtggacg gagaatgcag acgggtcagg cgctgtgaac
1440
ttcctgacag gcatgggggg cttcctgcag gcgggtgtct tcgggtgcac ggggttcagg
1500
gtcaccgcag cgggtgtgac ctttgaccct gtgtgtctgt cggggatctc cagagtgagc
1560
gtctccggca tcttctacca ggggaacaag ctcaacttct ctttttccga ggactccgtg
1620
accgtggagg tcacagctcg agcagggccc tgggtcctc acctggaggc tgagctgtgg
1680
ccatcccagt cccggtctc cctgttgcca ggacacaagg tctcctttcc ccgtcggct
1740
ggccggatac aaatgtcacc cccgaagctg cctggaagtt ccagctccga gttccctggg
1800
aggacttttt cagatgttag ggaccgcctc cagagcccc tctgggtcac cctgggttcc
1860
tccagcccca ccgagtcact cactgtggac cctgcctctg aataatcagg aacgggtggct
1920

115	120	125
Gly Ala Ala Ser Trp Glu His Ile Lys Ala Val Arg Lys Ala Val Ala		
130	135	140
Ile Pro Val Phe Ala Asn Gly Asn Ile Gln Cys Leu Gln Asp Val Glu		
145	150	155
Arg Cys Leu Arg Asp Thr Gly Val Gln Gly Val Met Ser Ala Glu Gly		
165	170	175
Asn Leu His Asn Pro Ala Leu Phe Glu Gly Arg Ser Pro Ala Val Trp		
180	185	190
Glu Leu Ala Glu Glu Tyr Leu Asp Ile Val Arg Glu His Pro Cys Pro		
195	200	205
Leu Ser Tyr Val Arg Ala His Leu Phe Lys Leu Trp His His Thr Leu		
210	215	220
Gln Val His Gln Glu Leu Arg Glu Glu Leu Ala Lys Val Lys Thr Leu		
225	230	235
Glu Gly Ile Ala Ala Val Ser Gln Glu Leu Lys Leu Arg Cys Gln Glu		
245	250	255
Glu Ile Ser Arg Gln Glu Gly Ala Lys Pro Thr Gly Asp Leu Pro Phe		
260	265	270
His Trp Ile Cys Gln Pro Tyr Ile Arg Pro Gly Pro Arg Glu Gly Ser		
275	280	285
Lys Glu Lys Ala Gly Ala Arg Ser Lys Arg Ala Leu Glu Glu Glu Glu		
290	295	300
Gly Gly Thr Glu Val Leu Ser Lys Asn Lys Gln Lys Lys Gln Leu Arg		
305	310	315
Asn Pro His Lys Thr Phe Asp Pro Ser Leu Lys Pro Lys Tyr Ala Lys		
325	330	335
Cys Asp Gln Cys Gly Asn Pro Lys Gly Asn Arg Cys Val Phe Ser Leu		
340	345	350
Cys Arg Gly Cys Cys Lys Lys Arg Ala Ser Lys Glu Thr Ala Asp Cys		
355	360	365
Pro Gly His Gly Leu Leu Phe Lys Thr Lys Leu Glu Lys Ser Leu Ala		
370	375	380
Trp Lys Glu Ala Gln Pro Glu Leu Gln Glu Pro Gln Pro Ala Ala Pro		
385	390	395
Gly Thr Pro Gly Gly Phe Ser Glu Val Met Gly Ser Ala Leu Ala		
405	410	415

<210> 5757

<211> 2362

<212> DNA

<213> Homo sapiens

<400> 5757

cagatcacca gcgtttgtag acagtagtgt ggcgcttgga gtttacctga gggccagtgg
 60

agctccaggg acctatcagg acggggacct gtggggactg ggaaggcctg tggggctgcg
 120

tggagcccgg tactggaggg cgacgggggt gacggggacg ctgaggacac agagcggagg
 180

ggcgatgatgg ctgctggggc tggaggtgtc gagagtgtact gtgctggggc tgcctcatcg
 240

ttgtctgagc ctcccgtgct tgccgtgtgt gccgtttctt tgatgaggct ctcagaggcc
 300

atcgtgcggg agcacccttg cccctgtcc tacgtccggg cccacctctt caagctgtgg
 660
 caccacacgc tgcaggtgca ccaggagctg cgagaggagc tggccaaggt gaagaccctg
 720
 gagggcatcg ctgctgtgag ccaggagctg aagctgcggt gtcaggagga gatatccagg
 780
 caggagggag cgaagccac cggcgacttg cccttcact ggatctgcca gccctacatc
 840
 cggccggggc ccaggaggag gagcaaggag aaggcaggtg cgcgcagcaa gcgggccctg
 900
 gaggaagagg aggggtggcag ggaggtcctg tccaagaaca agcaaaagaa gcagctgagg
 960
 aacccccaca agaccttcga cccctctctg aagccaaaat atgcaaagtg tgaccagtgt
 1020
 ggaaacccaa agggcaacag atgtgtgttc agcctgtgcc gcggctgctg caagaagcga
 1080
 gcctccaaag agactgcaga ctgcccaggt caggattgc tttttaaaac caaattggag
 1140
 aagtctctgg cctggaaaga ggcccagcct gagctgcagg agcctcagcc agcagcacct
 1200
 ggaacaccag gtggcttctc cgaagtcag ggagtgccc tggcctgaag gccacaacc
 1260
 cccacccccca ggactgctgc tggagcctgg acacgtccta cttaagaaaa tgccttttac
 1320
 tcagggaatc tcctgtact taatgtggaa agacacgccc atgtccccct tcggcccact
 1380
 ctgggggcct ggaaatgctg cagtggggag caggccccag gctggacctg ccctgtcctc
 1440
 agcacgcgtg tgcaaaagtg aacaataaat catttcaaag atgaaaaaaaa aaaaaaaaaa
 1500
 aaaaagtcga cgc
 1513

<210> 5756

<211> 415

<212> PRT

<213> Homo sapiens

<400> 5756

Xaa	Arg	Val	Lys	Gly	Asn	Leu	Tyr	Cys	Glu	Val	Cys	Pro	Glu	Asp	Arg
1				5					10					15	
Pro	Leu	Ile	Val	Gln	Phe	Cys	Ala	Asn	Asp	Pro	Glu	Val	Phe	Val	Gln
			20					25					30		
Ala	Ala	Leu	Leu	Ala	Gln	Asp	Tyr	Cys	Asp	Ala	Ile	Asp	Leu	Asn	Leu
		35					40					45			
Gly	Cys	Pro	Gln	Met	Ile	Ala	Lys	Arg	Gly	His	Tyr	Gly	Ala	Phe	Leu
	50				55					60					
Gln	Asp	Glu	Trp	Asp	Leu	Leu	Gln	Arg	Met	Ile	Leu	Leu	Ala	His	Glu
65					70				75					80	
Lys	Leu	Ser	Val	Pro	Val	Thr	Cys	Lys	Ile	Arg	Val	Phe	Pro	Glu	Ile
			85					90					95		
Asp	Lys	Thr	Val	Arg	Tyr	Ala	Gln	Met	Leu	Glu	Lys	Ala	Gly	Cys	Gln
			100				105						110		
Leu	Leu	Thr	Val	His	Gly	Arg	Thr	Lys	Glu	Gln	Lys	Gly	Pro	Leu	Ser

1	5	10	15
Asp Leu Met Pro Gly Ile Leu Lys Gln Pro Ser Leu Thr Leu Glu Leu			
	20	25	30
Phe Pro Asn His Thr Asp Asn Leu Asn Ser Ser Gln Arg Leu Ser Pro			
	35	40	45
Ser Ser Arg Met Arg Lys Leu Pro Gln Gly Arg Pro Val Pro Pro Leu			
	50	55	60
Gly Pro Glu Thr Arg Val Ser Val Val Trp Val Glu Arg Tyr Asp Asp			
65	70	75	80
Ile Glu Asn Phe Pro Leu Ser Glu Leu Met Thr Glu Ile Ser Thr Gly			
	85	90	95
Val Glu Thr Thr Ala Asn Ser Ser Thr Ser Leu Arg Ser Thr Thr Leu			
	100	105	110
Glu Lys Glu Val Pro Val Ile Phe Ile His Pro Leu Asn Thr Gly Leu			
	115	120	125
Phe Arg Ile Lys Ile Gln Gly Ala Thr Gly Lys Phe Asn Met Val Ile			
	130	135	140
Pro Leu Val Asp Gly Met Ile Val Ser Arg Arg Ala Leu Gly Phe Leu			
145	150	155	160
Val Arg Gln Thr Val Ile Asn Ile Cys Arg Arg Lys Arg Leu Glu Ser			
	165	170	175
Asp Ser Tyr Ser Pro Pro His Val Arg Arg Lys Gln Lys Ile Thr Asp			
	180	185	190
Ile Val Asn Lys Tyr Arg Asn Lys Gln Leu Glu Pro Glu Phe Tyr Thr			
	195	200	205
Ser Leu Phe Gln Glu Val Gly Leu Lys Asn Cys Ser Ser			
210	215	220	

<210> 5755

<211> 1513

<212> DNA

<213> Homo sapiens

<400> 5755

```

nnacgcgtga aggggaacct gtactgcgag gtgtgccccg aggaccggcc cctcatcgtg
60
cagttctgtg ccaatgaccc ggaggtgttt gttcaggcgg ctctcctggc tcaggattac
120
tgtgacgcca ttgacctgaa cttgggctgc ccacagatga tagccaagag aggtcactat
180
ggcgcccttc tgcaggacga gtgggacctg ctccaaagaa tgattttgct ggcccacgag
240
aaactctctg ttcctgtcac gtgcaaaatc cgtgtcttcc cggagattga caagaccgtg
300
aggtacgccc agatgctgga gaaggccggc tgccagttgc tgacggtgca cggacgcacc
360
aaggagcaga aggggcccct gtcgggtgca gcgtcctggg agcatatcaa ggctgtgcgg
420
aaggctgtgg ccatccctgt gtttgctaac gggaacatcc agtgcctgca ggacgtggag
480
cgctgcctcc gggacacggg tgtgcagggc gtcatgagcg cagagggcaa cctgcacaac
540
cccgccctgt tcgaggggcg gagccctgcc gtgtggggagc tggccgagga gtatctggac
600

```

cctttttgtc tagggcttcc tcttgagacc ctcttccatc cattgggcct ttgaaaggac
4380
taatcagaca cacacacaca cacacacaca cacacacaca cacactcgca tactcatgca
4440
cattttcctt catttccaga tcttttattt cagagcagcc cattttcctc tggattcatt
4500
gatgaataca agtaccacaca cctttggcca gtaatgtcag ttacctgctg caggttctgt
4560
gtatgaggcc ttcatagaac gttaccttct ccatacacta gggaagcatt tgcagactc
4620
tgcagactgg gttctagaga ggcagagtct ttaagagtat tcatttcttc tggaaagggtg
4680
agctttaccc aaagtgaag ttagccttgc tcaaagatgt gttttgtggt aggtggtaaa
4740
aataaataaa taaataaata ataaaaaag aaacatgtat tggaggtaat ttgacactgc
4800
tgctggcagt agttctctat tcaccatttt aaagccatt caggttctct cttctgaaa
4860
agaactgatt gctgtgttta catgaaatga cattggagtc agatggtctg ttttaaagat
4920
ttccatgaca gcctcttttc ctgagttgga gagattggag gtggtctatc cgtacgatgt
4980
ggaatcaaac ggtgggtttc ttagtagcta aagaagccat gtacttctag tgtgtttctc
5040
agaatatcaa ctcatgttct tcagatgctt ttcttttttt aatggtgagg gaaaaggat
5100
aatttgggat tccacagtgc cttgcatata gtaggcgccc agtaaatact tgttgaagca
5160
aaccaagttt cccaagtcct catctcttat agtgaccaag acatctttct cctctgaagg
5220
gcttggcagt tgtggctaaa aaataagcag tatcattatt tgcttgaaat catatataca
5280
gtttgtatga atttcagtat gttgccaaga catgattttt tcttattgta tttctgtaa
5340
atatttctgg cactgaactg taaagtaaag gcaaagtgt aatatgaagg cgtgcccgtg
5400
ccccttgctt cctgtgtttc atcttcgtcg gttaggggaag aaggtccaga ggtttgtttg
5460
tatttatgcc gatcctttgt ccagaagaag cccatggaat attgaatgta atacatttag
5520
tcaattaaat ttaaggaga ttcttatcta ataactttgt gtgtgctttt ggatacaggc
5580
tgaggcttta ctctacact ggtgctgtta attttaccct ttcaggggat gtctgctcgg
5640
ctttggtgc cctttataat ttagatct
5668

<210> 5754

<211> 221

<212> PRT

<213> Homo sapiens

<400> 5754

Asp Ser Leu Glu Ser Asn Ile Ser Asp Gln Asp Ser Asp Ser Asn Met

ttgggtggct actgtagaa atggctgttg tcatgttttc tggactttgc cagccaacag
2760
atccctgcc a ggttttgaa atacttctat tacctcgtg ctacttttct gcaggataa
2820
aacttttgag gtggccagac ccagaacatc caaggattcc tgttacagt ctacagtata
2880
cactgctcat ttatcctatt ctcagtgtct ttcttcttta gtaagattat ttttaaaaa
2940
taagtatat ttaaagtcca aagaggaatg atcacagttg tataaggggt gttttccac
3000
ttgaactctg atgtcagtcg actgtgggtc agagctacaa ccatctgttt ggtttgatgt
3060
tttgggtggt tacttacgga gtggggatag tgtgagacct aattccctgt gcaaagtct
3120
cttattccag aaatgtgcat ttgtcatct ataagcaaga aatatgggca tagcagctct
3180
tggtttaaag ttgcccataa cctgttcag ttgttttaa gctcaggtaa agataacctc
3240
ctctttctat gactccagtt tccattcagg ttatagtatt attcaatagt tgattttct
3300
tttaagctgg gcaataaatt gatgtttcca gatggaaca tgggagaggg catataggat
3360
aaagatgagc aaattctacc ctaaaaatgt tctagtagtt cacaggaaga agatgaggt
3420
taataacttt caaggtaatt ctagattgac attttgaggg gaaaatgggc tcttgttcta
3480
gttgaagtga gcagagaagg ctataaatta atatgtaact tacagcattc cagaggttaa
3540
aaataactga tgcagatgta cttcttcagt gtgattcttc agatcaaact tttacttttg
3600
gcatagttaa tttcagaaaa atgtgctgta tgtgtgtgtg tatgagggtt ggtcttgctg
3660
atccttcagt tagctctaaa ttctggcaac tccttgtaat tccaatgtat ttgatacatg
3720
aacaatcatg ttgaatgcat ttgtgatctg ggagacttcc tcgtcttcca gggaaggaag
3780
gatgtgcagc ccetgaaggc atgaaactcc cagtgtgtac ggagccagtg gaatatggga
3840
taccatacc ttaccaggcg ctggttcctt ctgctcacia taacatctgc ccaaagaggg
3900
agtgggaaga acgcttagct ctttactag tatggatttg agttcatggt cactattttt
3960
accacactgc ctttgtaaaa aatcactttg agtagaatag cactggagga acatatttag
4020
cacctaatat taatatttag tagtccattg ataaatttgc cagcatatgt tctagcctct
4080
ggggggaaac caggaccact tttgtctgtg gcttaaacag ttcagttgct atatctgttg
4140
ggtatgccgg gggatgga gtgtggcatt ccgtgaagag gaagggtgta agtaagggtt
4200
cccttctact gccttcttaa gttgcaggag ggagcttttc tcctccctc tgggtgggag
4260
cactgaggac agtgaggagg gcttttacct tgtaatcct ttccttattt agctagcttt
4320

gagctttttcc ccaatcatac agacaatctt aattcctcac agaggctcag tcccagttcc
1140
agaatgagga agctgcctca gggtcgcctt gttcctcccc ttggacctga gacaagagtt
1200
tctgtagtct ggggtggaacg ctatgatgat atagaaaact ttcccccttc agagctgatg
1260
acagagatca gtactggtgt ggaaactact gcaaatagta gcacttcact gagatctaca
1320
actcttgaaa aagaagttcc tgtcatcttc atccaccctt taaacactgg attattccgg
1380
ataaaaaattc aaggagccac tggaaaattt aatatggtca tccctcttgt ggatgggatg
1440
attgtcagca ggcgagctct tggctttctg gtgaggcaga ctgtaattaa catttgtaga
1500
agaaagagac tggaaagtga ctctacagt ccccccatg tccgccgga acagaaaatc
1560
accgacattg tcaacaagta ccggaacaag cagctggagc cagagtttta tacttcactt
1620
ttccaggagg ttggactcaa gaactgcagt tcttagacca ctgaatttct aagactgttg
1680
aactccagtt tgggaactat aacacagcag aacagtttga taggtgatca ctgtaaaaat
1740
aaaaacaaat cactcccaag agcttactgt ttaatcacca gaatagaaga aacacattat
1800
aaccatttg atagaagact ttgggctatc tagtgaaatg ggctcccaga cacaatcata
1860
ctctgtctga taatgatgat atacatttta gccataaact ttctttttaa agtgacaatt
1920
ttagttaaac ataagccttt tgaggagaaa ggcttttatg catctcagtt aaacacgtgc
1980
attggtagta tcaacaaatt tgcaatatag aagttgaaga tagtttttta cctcactttt
2040
taggaggttg tattcaaaat taaaatctca gaatcttaca ggacatttaa agactcatgt
2100
tgatagcatg gaggagaagg aaagaagtca cagccttcta ctcagttgta ggtcttcttg
2160
tcatccagct gtcacactga caaaaagaaa agatgataca tgttttttgc tcagataaga
2220
agcctgacat taaaagatgt catatttttt tctccacatt tcaaaaagtt gtccttctca
2280
tactgcaca gatctgtctg aaagcctcag tttctgagtg acccaggaac agatcagaaa
2340
tggagcatgg ccttgctcct taatggggat gcaaataaag tttgtggggg taaaagttat
2400
aagacagcag tgatacccca ctctctccat tattgtccag cggggtgaca taatgacagg
2460
ttaaataattt gtgattcatt gattaaatat tatttaaaga aatgtaaatt cacaataagg
2520
gttgaaaatt atttggtttc atccattgtc tcttatttca ggaccaagca gcaaactgca
2580
gtagtttgtg aaggattcta atatgggggt caggaatagc ctctcaacgc tactaattca
2640
gatctctccc agagaactac tggatttcct cataattgac aaacatgagt gaccacctct
2700

50	55	60
Ser Arg Leu Tyr Thr Val Asp Cys Arg Phe Arg Glu Arg Ile Glu Glu		
65	70	75
Asn Gly His Asn Thr Tyr Ala Ser Gln Arg Trp Arg Arg Arg Gly Gln		80
	85	90
Pro Met Phe Leu Ala Leu Asp Arg Arg Gly Gly Pro Arg Pro Gly Gly		95
	100	105
Arg Thr Arg Arg Tyr His Leu Ser Ala His Phe Leu Pro Val Leu Val		110
	115	120
Ser		125

<210> 5753

<211> 5668

<212> DNA

<213> Homo sapiens

<400> 5753

```

nnaccggtac tttgtcttgg ataacagtgt catcctggca atgctggaac aacctcttgg
60
aatgagcag aatgattttt tcccctctgt cactgtgctg gtccggggaa tgtctggaag
120
acttgcttgg gcacaacagc tttgtctttt acccagagga gcaaagcaa atcagaagct
180
ttttgtacct gaacctcgcc cagttcctaa aatgacgttg gatttaaata ttctgtgaaa
240
catcgcccat ttctgaaga ggtggacaag attccttttg tgaaagcaga tctcagcatt
300
ccagatttgc atgaaatagt cactgaagaa ttagaagaga gacacgaaaa attaaggagt
360
ggcatggccc agcagattgc ttatgaaata caccttgagc aacagagtga ggaggaattg
420
cagaagagaa gttttcctga cccagttacg gattgcaagc cccgcctcc tgcccaggaa
480
ttccaaacag cccgcctttt tctctcacac tttggatttt tgccttaga agcactgaag
540
gaacctgcaa atagtctgt acctcctcac cttattgcac ttgattccac gataacctgga
600
ttttttgatg acattgggta tctggatctc ttgccatgtc gtccttttga cacagttttt
660
attttctata tgaagccagg tcagaaaacg aaccaagaga ttttaaagaa tgtggagtct
720
tccagaactg ttcagccaca ttctctagaa tttttgcttt cccttggtg gtcagtagat
780
gtgggcagac accctgggtg gactgggcat gtttctacca gttggtctat taattgttgt
840
gatgatggtg aaggatctca acaagaagaa gtgatttcct ctgaagatat tggagctagc
900
attttcaatg gacagaagaa ggtgctgtat tatgctgatg cccttacaga aattgctttt
960
gtggttcctt ctctgtgga gtccttaact gattcattgg aaagtaacat ctcggaacaa
1020
gatagtgatt caaatatgga tcttatgcca ggaattctga aacagccatc cctgacactt
1080

```

515

520

<210> 5751

<211> 926

<212> DNA

<213> Homo sapiens

<400> 5751

ngcgggcatg gccaggcggg gtggcctcgg gccggggcag aggcctggct ccgctgcctg
 60
 acctggaaca gtctctgcct ctctccaagc ctcggtttcc ccagctggac ggtgatgggg
 120
 gtgagggcta gctgagggct ctctgcctt tcgtgcattc gctggtcact aatcgggcac
 180
 cttgtgggtg ctgtgctccg catgggggac ccagtgggtga cagagacgcc caccctcctg
 240
 gggctcccag agcagaggcg cgcagcagtt agacacgtga acaaggggcg aggcacacctg
 300
 gagatccgct ctgtacacgt gggcgctcgtg gtcacaaaag cagtgtcttc aggttcttac
 360
 gtggccatga accgcggggg ccgcctctac gggtcgacac tctacaccgt ggactgcagg
 420
 ttccgggagc gcatcgaaga gaacggccac aacacctacg cctcacagcg ctggcgccgc
 480
 cgcggccagc ccatgttctt ggcgctggac aggagggggg ggccccggcc aggcggccgg
 540
 acgcggcggg accacctgtc cgcaccactt ctgcccgctc tggctctctg aggccttgag
 600
 aggcggcgcg ctccccaagg tgctgggct ggtggcgagg ggccccggca cgcttgttct
 660
 tccccctgcg ggctctgtaa gcgctgagtg cccaccgtgt gcgggcgctg tggacacagc
 720
 ccaggagccc tccagggggg tccagcctg aggggggtgt ggccaccaag caggttcaat
 780
 cctgagttgg ggacctgag gacccaacag ggcgcctctc gggctgaagg acgcagacgt
 840
 cgaaaggctg agggggacgt cccaggcagg gcccggcaga ggcaggggct cggggggggg
 900
 agcacgttgg gagtgggggc aggagc
 926

<210> 5752

<211> 129

<212> PRT

<213> Homo sapiens

<400> 5752

Met Gly Asp Pro Val Val Thr Glu Thr Pro Thr Leu Leu Gly Leu Pro
 1 5 10 15
 Glu Gln Arg Arg Ala Ala Val Arg His Val Asn Lys Gly Ala Gly Ile
 20 25 30
 Leu Glu Ile Arg Ser Val His Val Gly Val Val Val Ile Lys Ala Val
 35 40 45
 Ser Ser Gly Phe Tyr Val Ala Met Asn Arg Arg Gly Arg Leu Tyr Gly

4910

agggggaaat ctgactcaga ttcagtcfaat tcagtgtttt ctgacacacc ttttgtggcg
 1860
 tccacttaat ttgtgcctat atttgtatga tgtcataatt taatctgttc atattttaact
 1920
 ttgtgtgtgg tctgcaaaat aaacagcagg acagaaattg tgttgttttg ttctttgaaa
 1980
 tacaacaaaa ttctcttaaa atgattggta ggaaatgagg taaagtactt cagttcctca
 2040
 atgtgccata gaaagatggg gttgttttcc aaagtttaag ttctagatca caatatctta
 2100
 gcttttagca ctattggtaa tttcagagta ggcccaaagg tgatattgact ccattgttcc
 2160
 ctttatttag gatattgaaa gaaaaaataa actttatgta ttagtgtcct ttaaaaatag
 2220
 actttgctaa cttactagta ccagagttat tttaaagaaa aacactagtg tccaatttca
 2280
 tttttaaaag atgtagaaag aagaatcaag catcaattaa ttataaagcc taaagcaaag
 2340
 ttagatttgg gggttattca gccaaaatta ccgttttaga ccagaatgaa tagactacac
 2400
 tgataaaatg tactggataa tgccacatcc tatatggtgt tatagaaata gtgcaaggaa
 2460
 agtacatttg tttgcctgtc ttttcatttt gtacattctt ccatttctgt attcttgtac
 2520
 aaaagatctc attgaaaatt taaagtcatc ataatttggt gccataaata tgtaagtgtc
 2580
 aatacaaaaa tgtctgagta acttcttaaa tccctgttct agcaaaactaa tattggttca
 2640
 tgtgcttgtg tatatgtaaa tcttaaatta tgtgaactat taaatagacc ctactgtact
 2700
 gtgctttgga catttgaatt aatgtaaata tatgtaatct gtgacttgat attttgtttt
 2760
 atttggctat ttaaaaacat aaatctaaaa tgtcttatgt tatcagatta tgctattttg
 2820
 tataaagcac cactgatagc aaaaaaaaaa
 2849

<210> 5750

<211> 522

<212> PRT

<213> Homo sapiens

<400> 5750

Met	Ser	Leu	Arg	Val	His	Thr	Leu	Pro	Thr	Leu	Leu	Gly	Ala	Val	Val
1				5					10					15	
Arg	Pro	Gly	Cys	Arg	Glu	Leu	Leu	Cys	Leu	Leu	Met	Ile	Thr	Val	Thr
			20					25					30		
Val	Gly	Pro	Gly	Ala	Ser	Gly	Val	Cys	Pro	Thr	Ala	Cys	Ile	Cys	Ala
			35				40					45			
Thr	Asp	Ile	Val	Ser	Cys	Thr	Asn	Lys	Asn	Leu	Ser	Lys	Val	Pro	Gly
			50			55				60					
Asn	Leu	Phe	Arg	Leu	Ile	Lys	Arg	Leu	Asp	Leu	Ser	Tyr	Asn	Arg	Ile
65				70					75				80		
Gly	Leu	Leu	Asp	Ser	Glu	Trp	Ile	Pro	Val	Ser	Phe	Ala	Lys	Leu	Asn

actagtggta gtcagtttct gctttttact ccctctgaat tattaattgt ttgccaggtt
240
cactgggtggg aggctgagcc ggtggaaaag acaccgggaa gagactcaga ggcgaccata
300
atgtcgttac gtgtacacac tctgcccacc ctgcttgag cgcgtcgtcag accgggctgc
360
aggagctgc tgtgtttgct gatgatcaca gtgactgtgg gccctgggtgc ctctgggggtg
420
tgccccaccg cttgcatctg tgccactgac atcgtcagct gcaccaacaa aaacctgtcc
480
aagggtgcctg ggaacctttt cagactgatt aagagactgg acctgagtta taacagaatt
540
gggtttcttg attctgagtg gattccagta tcgtttgcaa agctgaacac cctaattctt
600
cgtcataaca acatcaccag catttccacg ggcagttttt ccacaactcc aaatttgaag
660
tgtcttgact tatcgtccaa taagctgaag acggtgaaaa atgctgtatt ccaagagttg
720
aagggttctg aagtgttct gctttacaac aatcacatat cctatctcga tccttcagcg
780
tttgaggggc tctcccagtt gcagaaactc tacttaagtg gaaattttct cacacagttt
840
ccgatggatt tgtatgttg aaggttcaag ctggcagaac tgatgttttt agatgtttct
900
tataaccgaa ttccttccat gccaatgcac cacataaatt tagtgccagg aaaacagctg
960
agaggcatct accttcatgg aaacctattt gtctgtgact gttccctgta ctccctgctg
1020
gtcttttggg atcgtaggca ctttagctca gtgatggatt ttaagaacga ttacacctgt
1080
cgctgtggg ctgactccag gcactcgcgt caggtaactc tgctccagga tagctttatg
1140
aattgtcttg acagcatcat caatgggtcc ttctgtgcgc ttggctttat tcatgaggct
1200
caggctcggg aaagactgat ggtccactgt gacagcaaga caggtaatgc aaatacggat
1260
ttcatctggg tgggtccaga taacagactg ctagagccgg ataaagagat ggaaaacttt
1320
tacgtgtttc acaatggaag tctggttata gaaagccctc gttttgagga tgctggagtg
1380
tattcttgta tcgcaatgaa taagcaacgc ctgttaaatg aaactgtgga cgtcacaata
1440
aatgtgagca atttactgt aagcagatcc catgctcatg aggcatttaa cacagctttt
1500
accactcttg ctgcttgctg gccagtatc gttttggtac tttgtacct ctatctgact
1560
ccatgcccct gcaagtgtaa aaccaagaga cagaaaaata tgctacacca aagcaatgcc
1620
cattcatoga ttctcagtc tggccccgct agtgatgcct ccgctgatga acggaaggca
1680
ggtgcaggta aaagagtggg gtttttggaa cccctgaagg atactgcagc agggcagaac
1740
gggaaagtca ggctctttcc cagcagggca gtgatatctg agggcatcct aaagtccacg
1800

				165					170					175	
Phe	Pro	Asn	Glu	Asn	Leu	Pro	Ser	Lys	Met	Leu	Leu	Val	Tyr	Asp	Leu
			180					185					190		
Tyr	Leu	Ser	Pro	Lys	Leu	Trp	Ala	Leu	Ala	Thr	Pro	Gln	Lys	Asn	Gly
		195					200					205			
Arg	Val	Gln	Glu	Lys	Val	Met	Glu	His	Leu	Leu	Lys	Leu	Phe	Gly	Thr
	210					215					220				
Phe	Gly	Val	Ile	Ser	Ser	Val	Arg	Ile	Leu	Lys	Pro	Gly	Arg	Glu	Leu
225					230				235					240	
Pro	Pro	Asp	Ile	Arg	Arg	Ile	Ser	Ser	Arg	Tyr	Ser	Gln	Val	Gly	Thr
			245					250				255			
Gln	Glu	Cys	Ala	Ile	Val	Glu	Phe	Glu	Glu	Val	Glu	Ala	Ala	Ile	Lys
			260					265				270			
Ala	His	Glu	Phe	Met	Ile	Thr	Glu	Ser	Gln	Gly	Lys	Glu	Asn	Met	Lys
	275						280				285				
Ala	Val	Leu	Ile	Gly	Met	Lys	Pro	Pro	Lys	Lys	Lys	Pro	Ala	Lys	Asp
	290				295					300					
Lys	Asn	His	Asp	Glu	Glu	Pro	Thr	Ala	Ser	Ile	His	Leu	Asn	Lys	Ser
305					310				315					320	
Leu	Asn	Lys	Arg	Val	Glu	Glu	Leu	Gln	Tyr	Met	Gly	Asp	Glu	Ser	Ser
			325					330				335			
Ala	Asn	Ser	Ser	Ser	Asp	Pro	Glu	Ser	Asn	Pro	Thr	Ser	Pro	Met	Ala
			340				345					350			
Gly	Arg	Arg	His	Ala	Ala	Thr	Asn	Lys	Leu	Ser	Pro	Ser	Gly	His	Gln
	355					360					365				
Asn	Leu	Phe	Leu	Ser	Pro	Asn	Ala	Ser	Pro	Cys	Thr	Ser	Pro	Trp	Ser
	370				375				380						
Ser	Pro	Leu	Ala	Gln	Arg	Lys	Gly	Val	Ser	Arg	Lys	Ser	Pro	Leu	Ala
385				390				395					400		
Glu	Glu	Gly	Arg	Leu	Asn	Cys	Ser	Thr	Ser	Pro	Glu	Ile	Phe	Arg	Lys
			405				410				415				
Cys	Met	Asp	Tyr	Ser	Ser	Asp	Ser	Ser	Val	Thr	Pro	Ser	Gly	Ser	Pro
		420					425				430				
Trp	Val	Arg	Arg	Arg	Gln	Ala	Glu	Met	Gly	Thr	Gln	Glu	Lys	Ser	
	435				440					445					
Pro	Gly	Thr	Ser	Pro	Leu	Leu	Ser	Arg	Lys	Met	Gln	Thr	Ala	Asp	Gly
	450				455				460						
Leu	Pro	Val	Gly	Val	Leu	Arg	Leu	Pro	Arg	Gly	Pro	Asp	Asn	Thr	Arg
465				470				475			480				
Gly	Phe	His	Gly	His	Glu	Arg	Ser	Arg	Ala	Cys	Val				
			485					490							

<210> 5749

<211> 2849

<212> DNA

<213> Homo sapiens

<400> 5749

gggtgagacg gtgggttgta tggagagaat gtgactgtac atttttataa gcaggactaa
60

cccaggaaag aggaaaaaat acatttaaca gtgaagaggc aacacagagc tccctattgt
120

gaaataaaac ccatttcaaa agttattgga aagaaagtaa ggtatggctc ttatgggtta
180

tcctctgaca gcagcgtcac tccctctggc agccccctggg tccggaggcg tcgccaagcc
 1320
 gagatgggga cccaggagaa aagccccggt acgagtcgcc tgctctcccg gaagatgcag
 1380
 actgcagatg ggctaccctg aggggtgctg aggttgccca ggggtcctga caacaccaga
 1440
 ggatttcctg gccatgagag gagcagggcc tgtgtataaa taccttctat ttttaataca
 1500
 agctccactg aaaaccacct tcgttttcaa ggttctgaca aacacctggc atgacagaat
 1560
 ggaattcggt cccctttgag agatttttta ttcattgtaga cctcttaatt tatctatctg
 1620
 taatatacat aaatcggtag gccatgggtt gaagaccacc ttctagtcca ggactcctgt
 1680
 tcttcccagc atggccacta ttttgatgat ggctgatgtg tgtgagtgtg atggccctga
 1740
 agggctgtag gacggagggt ccctggggga agtctgttct ttggtatgga atttttctct
 1800
 cttctttggt atggaatttt tcccttcagt gactgagctg tcctcgatag gccatgcaag
 1860
 ggcttctctga gagttcagga aagttctctt gtgcaacagc aagtagctaa gcctatagca
 1920
 tgggtgtctg taggacaaaa tcgatgttac ctgtcaagta aataaataat aaaacaccca
 1980
 aaaaaaaaaa aaaaaaaaaa
 1999

<210> 5748

<211> 492

<212> PRT

<213> Homo sapiens

<400> 5748

Xaa Met Ala Gln Ser Gly Gly Glu Ala Arg Pro Gly Pro Lys Thr Ala
 1 5 10 15
 Val Gln Ile Arg Val Ala Ile Gln Glu Ala Glu Asp Val Asp Glu Leu
 20 25 30
 Glu Asp Glu Glu Gly Ala Glu Thr Arg Gly Ala Gly Asp Pro Ala
 35 40 45
 Arg Tyr Leu Ser Pro Gly Trp Gly Ser Ala Ser Glu Glu Glu Pro Ser
 50 55 60
 Arg Gly His Ser Gly Thr Thr Ala Ser Gly Gly Glu Asn Glu Arg Glu
 65 70 75 80
 Asp Leu Glu Gln Glu Trp Lys Pro Pro Asp Glu Glu Leu Ile Lys Lys
 85 90 95
 Leu Val Asp Gln Ile Glu Phe Tyr Phe Ser Asp Glu Asn Leu Glu Lys
 100 105 110
 Asp Ala Phe Leu Leu Lys His Val Arg Arg Asn Lys Leu Gly Tyr Val
 115 120 125
 Ser Val Lys Leu Leu Thr Ser Phe Lys Lys Val Lys His Leu Thr Arg
 130 135 140
 Asp Trp Arg Thr Thr Ala His Ala Leu Lys Tyr Ser Val Val Leu Glu
 145 150 155 160
 Leu Asn Glu Asp His Arg Lys Val Arg Arg Thr Thr Pro Val Pro Leu

```
<210> 5747
<211> 1999
<212> DNA
<213> Homo sapiens
```

4905

<212> DNA

<213> Homo sapiens

<400> 5745

```

aaagtttttt tttttttctg cttcaggcac acggggaacc acgcgtttta atcaacgtat
60
cgataaaaaa caccagggca cggacactcc aggggaaatg cttattgagt aaagtatccg
120
aggaagtgat gcagggcagg' taaacagctg gtgctcagca gcgagaggac gcgtcactct
180
gccgtttctgc aggggtgacgc cctccccgta cctcgctgag agccacctgc agacacagca
240
ggccacagca gaatgcacag gtcactgttg taggggaaca aatcgtaatg cccagagaaa
300
acctgatagt gaaatgtaaa cagacaggac aggggtggttc caggtggcca ccaccgccag
360
gcccttcccc tgattgatct gagagcttca cagccggcgg cactgggacc catttccaga
420
aacactggaa caccaggtct ctcagatgcc cgcgggaggg gccccaggga ggcctttctc
480
agcatcagct tttgggtgac aaaccccata cagcaaaact gtacaaatac acacaacgga
540
ccccagctg acagtgagac caggacccta ggaaggtcag gtggtggtga agtcatcccc
600
tctccaaccg agcagagcct ggggttgggc tctgatgacc tcccgggcaa agtgtccagg
660
tggaggaagc aaactcccaa atggggcaca aaggtaataa aaagcagctg agagattgcg
720
ggatggggtc ggggccactt ggccgacacc ttctgcctcg cctggccggg cggggccagc
780
ctctgccac aggatggagg gtgactgtgc accctgctcc atgtacagga cgggttgagg
840
gtcccatgg
849

```

<210> 5746

<211> 140

<212> PRT

<213> Homo sapiens

<400> 5746

```

Met Thr Ser Pro Pro Pro Asp Leu Pro Arg Val Leu Val Ser Leu Ser
 1             5             10             15
Ala Gly Gly Pro Leu Cys Val Phe Val Gln Phe Cys Cys Met Gly Phe
      20             25             30
Val Thr Gln Lys Leu Met Leu Arg Lys Ala Ser Leu Gly Pro Leu Pro
      35             40             45
Arg Ala Ser Glu Arg Pro Gly Val Pro Val Phe Leu Glu Met Gly Pro
      50             55             60
Ser Ala Ala Gly Cys Glu Ala Leu Arg Ser Ile Thr Gly Arg Ala Trp
      65             70             75             80
Arg Trp Trp Pro Pro Gly Thr Thr Leu Ser Cys Leu Phe Thr Phe His
      85             90             95
Tyr Gln Val Phe Ser Gly His Tyr Asp Leu Phe Pro Tyr Asn Ser Asp

```

4903

<211> 427

<212> PRT

<213> Homo sapiens

<400> 5742

Gly Gly Cys Cys Ser Gly Pro Gly His Ser Lys Arg Arg Arg Gln Ala
 1 5 10 15
 Pro Gly Val Gly Ala Val Gly Gly Gly Ser Pro Glu Arg Glu Glu Val
 20 25 30
 Gly Ala Gly Tyr Asn Ser Glu Asp Glu Tyr Glu Ala Ala Ala Arg
 35 40 45
 Ile Glu Ala Met Asp Pro Ala Thr Val Glu Gln Gln Glu His Trp Phe
 50 55 60
 Glu Lys Ala Leu Arg Asp Lys Lys Gly Phe Ile Ile Lys Gln Met Lys
 65 70 75 80
 Glu Asp Gly Ala Cys Leu Phe Arg Ala Val Ala Asp Gln Val Tyr Gly
 85 90 95
 Asp Gln Asp Met His Glu Val Val Arg Lys His Cys Met Asp Tyr Leu
 100 105 110
 Met Lys Asn Ala Asp Tyr Phe Ser Asn Tyr Val Thr Glu Asp Phe Thr
 115 120 125
 Thr Tyr Ile Asn Arg Lys Arg Lys Asn Asn Cys His Gly Asn His Ile
 130 135 140
 Glu Met Gln Ala Met Ala Glu Met Tyr Asn Arg Pro Val Glu Val Tyr
 145 150 155 160
 Gln Tyr Ser Thr Glu Pro Ile Asn Thr Phe His Gly Ile His Gln Asn
 165 170 175
 Glu Asp Glu Pro Ile Arg Val Ser Tyr His Arg Asn Ile His Tyr Asn
 180 185 190
 Ser Val Val Asn Pro Asn Lys Ala Thr Ile Gly Val Gly Leu Gly Leu
 195 200 205
 Pro Ser Phe Lys Pro Gly Phe Ala Glu Gln Ser Leu Met Lys Asn Ala
 210 215 220
 Ile Lys Thr Ser Glu Glu Ser Trp Ile Glu Gln Gln Met Leu Glu Asp
 225 230 235 240
 Lys Lys Arg Ala Thr Asp Trp Glu Ala Thr Asn Glu Ala Ile Glu Glu
 245 250 255
 Gln Val Ala Arg Glu Ser Tyr Leu Gln Trp Leu Arg Asp Gln Glu Lys
 260 265 270
 Gln Ala Arg Gln Val Arg Gly Pro Ser Gln Pro Arg Lys Ala Ser Ala
 275 280 285
 Thr Cys Ser Ser Ala Thr Ala Ala Ala Ser Ser Gly Leu Glu Glu Trp
 290 295 300
 Thr Ser Arg Ser Pro Arg Gln Arg Ser Ser Ala Ser Ser Pro Glu His
 305 310 315 320
 Pro Glu Leu His Ala Glu Leu Gly Met Lys Pro Pro Ser Pro Gly Thr
 325 330 335
 Val Leu Ala Leu Ala Lys Pro Pro Ser Pro Cys Ala Pro Gly Thr Ser
 340 345 350
 Ser Gln Phe Ser Ala Gly Ala Asp Arg Ala Thr Ser Pro Leu Val Ser
 355 360 365
 Leu Tyr Pro Ala Leu Glu Cys Arg Ala Leu Ile Gln Gln Met Ser Pro
 370 375 380
 Ser Ala Phe Gly Leu Asn Asp Trp Asp Asp Asp Glu Ile Leu Ala Ser

ctggaggagt ggactagccg gtccccgagg cagcggagtt cagcctcgtc acctgagcac
960
cctgagctgc atgctgaatt gggcatgaag ccccttccc caggcactgt tttagctctt
1020
gccaaacctc cttcgccctg tgcgccaggt acaagcagtc agttctcggc aggggcccagc
1080
cgggcaactt ccccccttgt gtccctctac cctgctttgg agtgccgggc cctcattcag
1140
cagatgtccc cctctgcctt tggctgaat gactgggatg atgatgagat cctagcttcg
1200
gtgctggcag tgtcccaaca ggaataccta gacagtatga agaaaaacaa agtgcacaga
1260
gacccgcccc cagacaagag ttgatggaga cccagggatt ggacaccatc tccaacccc
1320
agtactcctg ctctccggtg ccacctcacc ttctttggct tcttccctct tgctccttc
1380
tgtttttct gctctccct cttttccctc ctctcactt ccctctggct agcccacccc
1440
tgactctct ctattgccc ctgccactat cactgtctc tctgccagct gatgtgccct
1500
gttgcccccc acccatccc gcacagaacc atccctgcat tccacagggg actcgggcaa
1560
gggtgccgaa gatagacaag aggcacacag agacagacca actggcagcc aggcagcccc
1620
agaggagaga gacattcaga cagaggaaag tctccctgcc cctcattcct tccaagatga
1680
gaaaaacttg ccgccacccc ccgacactga tgccagggag gtgggaggaa gaagtgggaa
1740
atttcccttc ccagtacccc caagaacgtc tgagccttca atgtgaatt tttctttat
1800
taaaattact tttatcttat aaaatcaact aatcaaaaat gatatagacg acagcactgg
1860
ctctgtgaag gtggcatctt tctgggcagg caggccatgg ggcattggagg aggggtgcaa
1920
gatatgggtt gctgtcttct ggcctccagc tgcatggagg ccggcccagg gtctaggggtg
1980
tgactgggc aagggcaggg cggcaggtgt caggccggtt tggacaatga aacctgacc
2040
ttgtgcatt ccttttgctt ccaccaccac tagcttcttt ggaatcttgg ggtgggggtc
2100
atctttgggg attatggctg ccacccggga tttgagtga gggagtgtgg gagcagcctt
2160
ggcagatggg gcacccgtgc cctgcagggt ttgacaagat ccgccatctg taatgtcctt
2220
ggcacaataa aaccaaagt cagtttccct gagcgactct gttctgtgtg gggcaggggt
2280
tgggcggggc tctgggcaga ggaatgcaatg gcacggacct tggcttgacc tcagaggtgt
2340
gaatgtctc cagcagggtc tgtctggggg cctggagttt gtatttgatt tgctgcttat
2400
taaacctcct tctggaccta ttgccactgg aaaaaaaaaa aaaa
2444

<210> 5742

<400> 5740

```

Met Ile Arg Lys Gln Ser Gln His His Gly Pro Ser Leu Ser Met Ser
 1           5           10           15
Ser Lys Pro Cys Gln Ala Leu Gln Leu Leu Ser Thr Leu Pro Ser Gly
 20           25           30
Leu Pro Val Cys Gly Gly Gln Lys Arg Lys Thr Thr Gln Gly Glu Cys
 35           40           45
Leu Leu Pro Pro Ala Gly Lys Gln Leu Gly His His Leu Ser Glu Ser
 50           55           60
Arg Cys Cys Ser Ser Trp Gln Gln Ser His Ser Glu Arg Ser Cys Val
 65           70           75           80
His Cys Leu Ser Gly Arg Pro Cys Gln Ser Pro Ser Leu Pro Pro Pro
 85           90           95
Tyr Leu Cys Arg Lys Pro Gly His His His Phe Lys Ala Leu Pro Ser
 100          105          110
Phe Leu Gly Arg Ala Gln Pro Gln
 115          120

```

<210> 5741

<211> 2444

<212> DNA

<213> Homo sapiens

<400> 5741

```

ggcggctgct gctccggggcc tgggcacagc aagcggcgac gtcaagctcc cggggttggc
60
gcggttggcg ggggcagtcc cgagcgtgag gaggtcggcg caggctacaa cagtgaggac
120
gagtatgagg cggctgcagc acgcatcgag gctatggacc ctgccactgt cgagcagcag
180
gagcattggt ttgaaaaggc cctacgagac aagaagggct tcatcatcaa gcagatgaag
240
gaggatggcg cctgtctctt ccgggctgta gctgaccagg tgtatggaga ccaggacatg
300
catgagggtt tgcgaaagca ttgcatggac tatctgatga agaatgccga ctacttctcc
360
aactatgtca cagaggactt taccacctac attaacagga agcggaaaaa caattgccat
420
ggcaaccaca ttgagatgca ggccatggca gagatgtaca accgtcctgt ggaggtgtac
480
cagtacagca cagaacccat caacacattc catgggatac atcaaaacga ggacgaaccc
540
attcgtgtta gctaccatcg gaatatccac tataattcag tggatgaatcc taacaaggcc
600
accattggtg tggggctggg cctgccatca ttcaaaccag ggtttgaga gcagtctctg
660
atgaagaatg ccataaaaac atcggaggag tcatggattg aacagcagat gctagaagac
720
aagaaacggg ccacagactg ggaggccaca aatgaagcca tcgaggagca ggtggctcgg
780
gaatcctacc tgcagtgggt gcgggatcag gagaaacagg ctgccagggt ccgaggcccc
840
agccagcccc ggaaagccag cgccacatgc agttcggcca cagcagcagc ctccagtggc
900

```

<400> 5738

```

Met Leu Pro Pro Trp Pro Ile Ser Ser His Gln Val Arg Met Ala Leu
 1             5             10             15
Gln His Leu Pro Leu Arg Leu Gln Leu Pro Ser Gln Val His Gln Glu
      20             25             30
Thr Thr Gly His His Trp Gln Trp Arg Gly Asp Met Glu His Gly Leu
      35             40             45
Gly Ser Arg Leu Leu Ala Pro Asp Val Gln Pro Gln Thr Pro Pro Val
      50             55             60
Met Gly Glu Val Trp Arg Pro Val Gln Leu Ser Gln Gly His Ala His
65             70             75             80
Leu Ser Leu Gly Ser Val Gly Lys Ala Tyr Pro Lys Ser His Ile Gln
      85             90             95
Gly Gly Xaa

```

<210> 5739

<211> 780

<212> DNA

<213> Homo sapiens

<400> 5739

```

actttcataa ttgtaacatt gaaatcttta atctggaata tgtactggca taaagagtga
60
ggcacataca tggctttact attttccaga gggccaactg cttttactga ataattccatt
120
ttactcgtta attggaacaa cctctagcct gtactaaatt tccatattta tttggcccgct
180
ttcaaagtcc tctattctct gtcctctgt ccacatctaa gtgctttaac tattgtggct
240
ttataaaaata ttccaatatc ccataggacc ttatccttag tacttctat tttaaagttt
300
tccttgcaga caggtaactt aaataccatc tcacagcacc catcatgtcc tatcttcagg
360
aaataaaaatc tctgggtatt tccaagggaa gtgaaggact gacaccatga ttagaaagca
420
gagccagcac catggcccggt ccctgagcat gtccagcaaa ccctgccagg ctctgcagct
480
cctgagcacc ctgccttcgg gtctgccagt gtgtgggggc cagaagagaa aaacaaccca
540
gggggaatgc ctccttcccc cagcaggaaa gcagcttgggt catcatctgt ctgaaagcag
600
gtgctgcagc agctggcaac aaagccactc tgaaaggagc tgtgtgcact gcctgtctgg
660
aaggccatgc cagagtccat cgttgcctcc accctacctg tgcaggaaac ctggacatca
720
ccacttcaag gccctacctt cctttctggg cagagcccaa ccacaataaa caggacgcgt
780

```

<210> 5740

<211> 120

<212> PRT

<213> Homo sapiens

```

      100      105      110
Glu Tyr Ile His Asn Phe Lys Leu Leu Gln Ala Ser Phe Lys Arg Met
      115      120      125
Asn Val Asp Lys Val Ile Pro Val Glu Lys Leu Val Lys Gly Arg Phe
      130      135      140
Gln Asp Asn Leu Asp Phe Ile Gln Trp Phe Lys Lys Phe Tyr Asp Ala
145      150      155      160
Asn Tyr Asp Gly Lys Glu Tyr Asp Pro Val Glu Ala Arg Gln Gly Gln
      165      170      175
Asp Ala Ile Pro Pro Asp Pro Gly Glu Gln Ile Phe Asn Leu Pro
      180      185      190
Lys Lys Ser His His Ala Asn Ser Pro Thr Ala Gly Ala Ala Lys Ser
      195      200      205
Ser Pro Ala Ala Lys Pro Gly Ser Thr Pro Ser Arg Pro Ser Ser Ala
      210      215      220
Lys Arg Ala Ser Ser Ser Gly Ser Ala Ser Lys Ser Asp Lys Asp Leu
225      230      235      240
Glu Thr Gln Val Ile Gln Leu Asn Glu Gln Val His Ser Leu Lys Leu
      245      250      255
Ala Leu Glu Gly Val Glu Lys Glu Arg Asp Phe Tyr Phe Gly Lys Leu
      260      265      270
Arg Glu Ile Glu Leu Leu Cys Gln Glu His Gly Gln Glu Asn Asp Asp
      275      280      285
Leu Val Gln Arg Leu Met Asp Ile Leu Tyr Ala Ser Glu Glu His Glu
      290      295      300
Gly His Thr Glu Glu Pro Glu Ala Glu Glu Gln Ala His Glu Gln Gln
305      310      315      320
Pro Pro Gln Gln Glu Glu Tyr
      325

```

<210> 5737

<211> 340

<212> DNA

<213> Homo sapiens

<400> 5737

```

ncaccccccc tggatgtggc tcttcggata tgcctttccc acggagccca gagacaaatg
60
tgcgtggccc tgggacagct ggaccggcct ccagacctcg cccatgacgg gaggagtctg
120
tggctgaaca tcaggggcaa ggaggcggct gcccaatcca tgttccatgt ctccacgcc
180
ctgccagtga tgaccggtgg tttcctgatg tacctgagag ggcagctgga gcctcagtgg
240
aagatgttgc agtgccatcc tcacctggtg gcttgaaatc ggccaaggtg ggagcattta
300
caccgcagaa atgacaccgc acgccagcgc cccgcggccg
340

```

<210> 5738

<211> 99

<212> PRT

<213> Homo sapiens

tcttgacagga accactccat tgccctccag ctccccagcc ttctcagtta taaacatgct
 3300
 ggccagatct cttagcctgc aaagagaact ttccccagtc accatagacc attctccttc
 3360
 ctgaaggctt ggggcagacc attcgtttat ttagagaaga gctatacatt cttctttctg
 3420
 gtcccatctt aaacgtcttc tggtgtgctg caccacagat ggtgtctcag atgctttggg
 3480
 gaatctttaa cagctgaatt tgagtcagtc ctcttaggct gcacctccag cctctgcaga
 3540
 tccccctca tttcccatgg atggtgggac cccattatc tctcatctcg gcattcaggg
 3600
 aacagtttcc ttagcggccc ctggtcacat gtcacgggc tgggcaggaa gcgtccctgg
 3660
 gtgctgtctc cacttctccc tctcaggaag cccagtttca tcttagtac cccccctgt
 3720
 gccgctgtc ggctggttat agcacttcca ctgctactgt cagataggaa gtgatcgaag
 3780
 cagggggcaa agagaaagcc catatttggt ctaagcagaa aagcaggaaa aaaaaaaaaa
 3840
 aagaaagaaa aacacctggt gacctgagag aagtaaattc cagaaggga ccaagaactc
 3900
 ttcccttccc tggtagtat ttccattatt ccgttaaggt ttaatatgca ttcagattac
 3960
 tttactaaa taggacacca taaagctttt gttatatatt aaatgtaaac tgaaaggaat
 4020
 gtaaacatat gtattgttaa ttataaatat agataagtaa tgacataata gatgaaaaag
 4080
 tcttattcag atgtatcaca ttcattttac attaccaccc tattgtcgca tggtagaata
 4140
 gttttttgtc tctgaatatg tgaataactt gacttgcatt gatcttttta catatttaat
 4200
 aaaaaaaaaa gtatatgtta aaaaaaaaaa aaaaaaaaaa a
 4241

<210> 5736

<211> 327

<212> PRT

<213> Homo sapiens

<400> 5736

Met	Pro	Gly	Pro	Thr	Gln	Thr	Leu	Ser	Pro	Asn	Gly	Glu	Asn	Asn	Asn
1				5					10				15		
Asp	Ile	Ile	Gln	Asp	Asn	Asn	Gly	Thr	Ile	Ile	Pro	Phe	Arg	Lys	His
			20					25					30		
Thr	Val	Arg	Gly	Glu	Arg	Ser	Tyr	Ser	Trp	Gly	Met	Ala	Val	Asn	Val
		35					40					45			
Tyr	Ser	Thr	Ser	Ile	Thr	Gln	Glu	Thr	Met	Ser	Arg	His	Asp	Ile	Ile
		50				55					60				
Ala	Trp	Val	Asn	Asp	Ile	Val	Ser	Leu	Asn	Tyr	Thr	Lys	Val	Glu	Gln
65				70					75					80	
Leu	Cys	Ser	Gly	Ala	Ala	Tyr	Cys	Gln	Phe	Met	Asp	Met	Leu	Phe	Pro
				85					90					95	
Gly	Cys	Ile	Ser	Leu	Lys	Lys	Val	Lys	Phe	Gln	Ala	Lys	Leu	Glu	His

gatacttgat atgaaagcca taatgacggt gacttgtgtc gtgggggaaa acataaggtc
1680
attttctccc tctactcaca atactaaagg gaaaaaatgg attcaaagct aggatttcag
1740
ggcccagcag tgttcctcca tcagcatggt agacaactac acagtatgtt gttagttttg
1800
aaagacattc actcaaggaa aacaccatct caactttgcc cgctcaccat gtcccttgcc
1860
cccatgtagc ccatttccca ggttatgttc ttttctttct cagggtcctc tttggtgggc
1920
agccactccc cgagatgttg ccatacagttt tctgcagtcc aaagagggta tggtaggta
1980
cgggtcttcc tgcctcattc ctcttctctt tctgttaggt ttcagccaca aaactgtcat
2040
tcactctagg ggacccctac taaagggtaa cttcagggtg gcagccctga gctccaaggc
2100
tctgcaccat gccacacact tgctgtaagg ctagaagtga agaccttatt aataggagca
2160
taattgagag ggagaatcat ggttctgcag tctggtgtag aacttggaat aacagcacag
2220
aaaaatctat gactcccaat atcttctaga ataaagaatt ttccctcttt aacacaaggg
2280
ccctccttgt cattgacctt agctaaacca tggcaattca taaatagagg aaacattaat
2340
gaattaaaag cattccttat tttttaacta atatttgtac attttcttag tctctttcca
2400
agtctttgcc tctttttttt ctttattttt attttttctt ttgacagatg gtatcccttc
2460
ctggatcatt catttcacct tggtttctaa ctttaggttt actttcactt gttatttgac
2520
ttagcaggtg caacaaaaac aagaaacaaa tgtgcccacc ccactttccg cttaactgaa
2580
aagcttaaaa taaatttctg aattatgtat cctgaagctt tgaaatttct ttattaatcg
2640
atgaaatatg aattctaaat tctagcattg aagcttttca ccaaaagaag tctctccaaa
2700
ataaatcttt tgcagcaaag tgatatttat tgagttatgt ggaaaagatg gcttgtattt
2760
ttcagattat tacaacacac tgtgcagaat tagacagatg ttccgtgggtg tttggtttcc
2820
ctttcttctc tctctgtctc actctgcatt atagcagcag cttatttctc taaggctgga
2880
cagcctggct ctcggcagtg acgtcctccc acacctgggc acaagtagta gtggctgtgc
2940
tatacccagc atcatgctta acagcgtgtt gcccttctga gcctgttgta ctactgatc
3000
tctttaaaaa caaaaaatag ctcttgtaaa aggtcacaat aactctatgc acctgatact
3060
gcagtggttc ctaggccatt cttcatctgc tctggacatc tcagtcatac ccaatgctca
3120
gtggatcatg accaaactcc tgtcatgtgg atgcacgtga gtgggtagca gggagtcagg
3180
atcctgcctt ctccagcaac cccttactgc tgtataactt gcataagcct ccctgggtgac
3240

ctagaattca gcgccgctg aattctagcg agcaggcggc aggcacggtc cgtgcggagc
60
aggcgagcga gcggaagac gcagccacct tcctcaccag ccagcccaca gcggtttggt
120
cccccttctcg ggagtgcgcc aatgcctggg ccgacccaaa ccctgtcccc aaatggcgag
180
aacaacaacg acatcatcca ggataataac gggaccatca ttcctttccg gaagcacaca
240
gtgcgcgggg agcgttccta cagttgggga atggcgggtca atgtgtattc tacctcgata
300
accaagaga ctatgagcag acatgacatc attgcatggg ttaatgacat agtatcttta
360
aactacacaa aagtggaaca gctttgttca ggagcggcct attgccatt catggacatg
420
ctcttcctcg gctgcattag tttgaagaaa gtaaaatttc aagcaaagct ggaacatgaa
480
tatattcaca attttaaact tctgcaagca tcatttaagc gaatgaacgt tgataaggta
540
attccagtgg agaagctagt gaaaggacgt ttccaggaca acctggattt tattcaatgg
600
tttaagaaat tctatgatgc taactacgat gggaaggagt atgatcctgt agaggcacga
660
caagggcaag atgcaattcc tcctcctgac cctgggtgaac agatcttcaa cctgccaaaa
720
aagtctcacc atgcaaactc cccacagca ggtgcagcta aatcaagtcc agcagctaaa
780
ccaggatcca caccttctcg accctcatca gccaaaaggg cttcttcag tggtcagca
840
tccaaatccg ataaagattt agaaacgcag gtcatacagc ttaatgaaca ggtacattca
900
ttaaacttg ccttgaagg cgtggaaaag gaaagggtt tctactttgg gaagttgaga
960
gagatcgagc tactctgcca agaacacggg caggaaaatg atgacctgt gcagagacta
1020
atggacatcc tgtatgttc agaagaacac gagggccaca cagaagagcc ggaagcagag
1080
gagcaagccc acgaacagca gccccgcag caggaagagt actgaccac cccggctgct
1140
cttgacatt ccattgtgtg tggaacgtt tcttctggag aattggaaca tgtgtggccc
1200
caagctcaac agaaaccagt tgttcccaat ctgccgttac catcaacgca ctgttgcata
1260
tgccagccac tgcgttggt tccattttc ttgccaagg tgtattagcg gacggccctc
1320
tgccaccta cccgagagat cgtagggtca catacatcca acttcaccac ttggctgctt
1380
gagattgggt ctgctctttt ctctatttct ttccagaaca actctttccc accccaacac
1440
cactgccacc accctctttt ttatcctggt gtgaaacaat ggtaatttga tatatggtat
1500
ttatattggc atttttcaac ccagtgtcac tagatgtcac acacatttgt ggtgctttga
1560
tgtttgcaag tctaacctct gaacataaat ttggtcaaat aattggaaca aagggaaca
1620

gtcagctata ctttcctctt ctggctgccc ctgtacatca cgaatgtgga tcaccttgat
 180
 gccaaaaagg cgggggtgcac aggtagcccc gaccctctca ggcattccag ccacagaaca
 240
 tcaaagtgag cgagtactgc gctggctgtg gcttcagaga acctgtatgt gccacgtgga
 300
 aaaacaggac accagagccc accagacagt gccggccagc agagaagcag agagccagcg
 360
 ccacacaaca tcaagaaggc cgacaaccag gttggaaacc aagacggagc tcagaccac
 420
 cacatgccc cagaggcttt tccagacccc atgatgttcc ggactgacct aaaaactaat
 480
 tgtcgagaag ccaaggggtga ggaggcagga agcacctccg gttggaggca cccaggcttg
 540
 ccagccacag agcgccccga agtcaccgtc atcccagccc ctggccttcc tgccgccctc
 600
 cggggccatg gcgctgctgt tcagctcagg cacaggggca cagcagaggt ttgggaagcg
 660
 gtctccccac cggcactggg attggcgggt ccaagcccag caaccggctt cgctccaca
 720
 cacacaccac acctgggact gtttttaata catagcaaca gactgggtta tttatttaag
 780
 atgtgtattg tgtcatatga agtttaagag acataaatgg cattttgtta tttattaaga
 840
 caaactccaa ttgttctctg gctgtttttt tcagttgtgt ctagcaaaat acttatctgc
 900
 cctttgaaat aaaatgtttt tgtttaaaaa atctcaaaaa aaaaaaaaaa
 950

<210> 5734

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5734

Xaa	His	Val	Val	Ile	Leu	Pro	Gly	Asp	Gly	Gly	Ser	Gly	Thr	Ala	Ala
1				5			10				15				
Ile	Ser	Phe	Thr	Gly	Ala	Leu	Lys	Ile	Pro	Gly	Val	Ile	Glu	Phe	Ser
			20				25				30				
Leu	Cys	Leu	Leu	Phe	Ala	Lys	Leu	Val	Ser	Tyr	Thr	Phe	Leu	Phe	Trp
	35					40				45					
Leu	Pro	Leu	Tyr	Ile	Thr	Asn	Val	Asp	His	Leu	Asp	Ala	Lys	Lys	Ala
	50				55			60							
Gly	Cys	Thr	Gly	Ser	Pro	Asp	Pro	Leu	Arg	His	Ser	Ser	His	Arg	Thr
65					70			75					80		
Ser	Lys														

<210> 5735

<211> 4241

<212> DNA

<213> Homo sapiens

<400> 5735

caggtgcact gtggacgtgg gtctgggggt ctcacccgcc cagcgagagc agaaccaatc
 660
 cagtcaggat gtcactgact ctaaatacagg tgattcaaga tgcccaaaaa tgatggatag
 720
 agaaacagaa atctctgaat gtcagaaccc tgtcttttaa aaaggcagtc actgccttca
 780
 ggtgggtgctg cccagaaaac ttaaaattta gtcgaggcag tttcaattgt tactgtggac
 840
 cgaattagga tcacaataaa tgataatgca gggtcttcaa aaaaaaaaaa a
 891

<210> 5732

<211> 193

<212> PRT

<213> Homo sapiens

<400> 5732

Pro Ala Ala Ser Arg Leu Arg Ala Glu Ala Gly Leu Gly Ala Leu Pro
 1 5 10 15
 Arg Arg Ala Leu Ala Gln Tyr Leu Leu Phe Leu Arg Leu Tyr Pro Val
 20 25 30
 Leu Thr Lys Ala Ala Thr Ser Gly Ile Leu Ser Ala Leu Gly Asn Phe
 35 40 45
 Leu Ala Gln Met Ile Glu Lys Lys Arg Lys Lys Glu Asn Ser Arg Ser
 50 55 60
 Leu Asp Val Gly Gly Pro Leu Arg Tyr Ala Val Tyr Gly Phe Phe Phe
 65 70 75 80
 Thr Gly Pro Leu Ser His Phe Phe Tyr Phe Phe Met Glu His Trp Ile
 85 90 95
 Pro Pro Glu Val Pro Leu Ala Gly Leu Arg Arg Leu Leu Leu Asp Arg
 100 105 110
 Leu Val Phe Ala Pro Ala Phe Leu Met Leu Phe Phe Leu Ile Met Asn
 115 120 125
 Phe Leu Glu Gly Lys Asp Ala Ser Ala Phe Ala Ala Lys Met Arg Gly
 130 135 140
 Gly Phe Trp Pro Ala Leu Arg Met Asn Trp Arg Val Trp Thr Pro Leu
 145 150 155 160
 Gln Phe Ile Asn Ile Asn Tyr Val Pro Leu Lys Phe Arg Val Leu Phe
 165 170 175
 Ala Asn Leu Ala Ala Leu Phe Trp Tyr Ala Tyr Leu Ala Ser Leu Gly
 180 185 190
 Lys

<210> 5733

<211> 950

<212> DNA

<213> Homo sapiens

<400> 5733

nnccacgtcg tcattctccc cggggacggt gggagtggca cggccgccat cagcttcaca
 60
 ggggccttgaa aaattccagg cgtgatagag ttctcactgt gtctgctgtt tgccaagctg
 120

gccccgcagg tagatcttgg gggctctgcca gccttcgggg gcttccttta gccccgcctt
 120
 cagccagatg cgcctcaggt ctttctcgaa cttgatctgc aagacgcaga gagagggacc
 180
 gccaaagtaat tcgtggcaaa gaaacgtgtt ctcagcactt tgccctccca gggccaagca
 240
 gggggccact cacctgcttg cgtctcaggc gtcctctctg gaccttcctc cgcaggaacc
 300
 gcgtcttctt caccagcttc cggacttctg ggtggttcat cttccgccgg cggatcttca
 360
 gcacgttttt gcactaaatt t
 381

<210> 5730

<211> 64

<212> PRT

<213> Homo sapiens

<400> 5730

Phe	Val	Ala	Lys	Lys	Arg	Val	Leu	Ser	Thr	Leu	Pro	Ser	Gln	Gly	Gln
1				5					10					15	
Ala	Gly	Gly	His	Ser	Pro	Ala	Cys	Val	Ser	Gly	Val	Pro	Pro	Gly	Pro
			20					25				30			
Ser	Ser	Ala	Gly	Thr	Ala	Ser	Ser	Ser	Pro	Ala	Ser	Gly	Thr	Cys	Gly
		35					40					45			
Gly	Ser	Ser	Ser	Ala	Gly	Gly	Ser	Ser	Ala	Arg	Phe	Cys	Thr	Lys	Phe
	50						55				60				

<210> 5731

<211> 891

<212> DNA

<213> Homo sapiens

<400> 5731

ccggccgcgt ccaggctgcg ggccgaagcc gggctcgggg cgctgccggg gcgggcgctc
 60
 gccagctact tgctcttctt gcggtcttac ccggtgctca ccaaggcggc caccagtggc
 120
 atttgtcag cacttgggaa cttctgggcc cagatgattg agaagaagcg gaaaaaagaa
 180
 aactctagaa gtctggatgt cggtagggcct ctgagatatg ccgtttacgg gttcttcttc
 240
 acagggccgc tgagtcactt cttctacttc ttcatggaac attggatccc tctgaggtc
 300
 cccctggcag ggctcaggag gcttctcctg gaccgcctcg tctttgcacc ggccttcctc
 360
 atgttgttct tctcatcat gaactttctg gaggggaaag acgcctcagc cttcgccgcc
 420
 aagatgaggg ggggcttctg gccggcgctg aggatgaact ggcggtgtg gacgccacta
 480
 cagttcatca acatcaacta cgtccctctg aagttccggg tgctcttcgc caacctggca
 540
 gctctgttct ggtatgccta cctggcctcc ttggggaagt gacgaccgct gggagaacat
 600

1	5	10	15												
Trp	Glu	Gly	Val	Gly	Ala	Thr	Met	Ser	Ser	Tyr	Gln	Lys	Glu	Leu	Glu
	20	25	30												
Lys	Tyr	Arg	Asp	Ile	Asp	Glu	Asp	Glu	Ile	Leu	Arg	Thr	Leu	Ser	Pro
	35	40	45												
Glu	Glu	Leu	Glu	Gln	Leu	Asp	Cys	Glu	Leu	Gln	Glu	Met	Asp	Pro	Glu
	50	55	60												
Asn	Met	Leu	Leu	Pro	Ala	Gly	Leu	Arg	Gln	Arg	Asp	Gln	Thr	Lys	Lys
65				70					75						80
Ser	Pro	Thr	Gly	Pro	Leu	Asp	Arg	Glu	Ala	Leu	Leu	Gln	Tyr	Leu	Glu
			85					90						95	
Gln	Gln	Ala	Leu	Glu	Val	Lys	Glu	Arg	Asp	Asp	Leu	Val	Pro	Phe	Thr
	100						105						110		
Gly	Glu	Lys	Lys	Gly	Lys	Pro	Tyr	Ile	Gln	Pro	Lys	Arg	Glu	Ile	Pro
	115						120					125			
Ala	Glu	Glu	Gln	Ile	Thr	Leu	Glu	Pro	Glu	Leu	Glu	Ala	Leu	Ala	
	130					135				140					
His	Ala	Thr	Asp	Ala	Glu	Met	Cys	Asp	Ile	Ala	Ala	Ile	Leu	Asp	Met
145				150						155					160
Tyr	Thr	Leu	Met	Ser	Asn	Lys	Gln	Tyr	Tyr	Asp	Ala	Leu	Cys	Ser	Gly
			165					170						175	
Glu	Ile	Cys	Asn	Thr	Glu	Gly	Ile	Ser	Ser	Val	Val	Gln	Pro	Asp	Lys
		180						185					190		
Tyr	Lys	Pro	Val	Pro	Asp	Glu	Pro	Pro	Asn	Pro	Thr	Asn	Ile	Glu	Glu
	195						200					205			
Ile	Leu	Lys	Arg	Val	Arg	Ser	Asn	Asp	Lys	Glu	Leu	Glu	Glu	Val	Asn
	210					215				220					
Leu	Asn	Asn	Ile	Gln	Asp	Ile	Pro	Ile	Pro	Met	Leu	Ser	Glu	Leu	Cys
225				230						235					240
Glu	Ala	Met	Lys	Ala	Asn	Thr	Tyr	Val	Arg	Ser	Phe	Ser	Leu	Val	Ala
			245						250					255	
Thr	Arg	Ser	Gly	Asp	Pro	Ile	Ala	Asn	Ala	Val	Ala	Asp	Met	Leu	Arg
	260							265					270		
Glu	Asn	Arg	Ser	Leu	Gln	Ser	Leu	Asn	Ile	Glu	Ser	Asn	Phe	Ile	Ser
	275						280					285			
Ser	Thr	Gly	Leu	Met	Ala	Val	Leu	Lys	Ala	Val	Arg	Glu	Asn	Ala	Thr
	290				295					300					
Leu	Thr	Glu	Leu	Arg	Val	Asp	Asn	Gln	Arg	Gln	Trp	Pro	Gly	Asp	Ala
305				310					315						320
Val	Glu	Met	Glu	Met	Ala	Thr	Val	Leu	Glu	Gln	Cys	Pro	Ser	Ile	Val
			325						330					335	
Arg	Phe	Gly	Tyr	His	Phe	Thr	Gln	Gln	Gly	Pro	Arg	Ala	Arg	Ala	Ala
		340						345					350		
Gln	Ala	Met	Thr	Arg	Asn	Asn	Glu	Leu	Arg	Arg	Gln	Gln	Lys	Lys	Arg
	355						360						365		

<210> 5729

<211> 381

<212> DNA

<213> Homo sapiens

<400> 5729

naaatttatt actacgcatc acagcagcaa cgggcgggaa gggcggcgcc agactcattt

60

<212> DNA

<213> Homo sapiens

<400> 5727

ntgagaaggg aggtgaccac caggactggc tctgtgagta ccacacagtg ggagggggtg
60
ggggccacca tgtcatcata tcagaaggaa ctggagaaat acagagacat agatgaagat
120
gagatcctaa ggaccttgag ccccgaggag ctagagcagc tggactgcga actacaggag
180
atggatcctg agaacatgct cctgccagct ggactaagac aacgtgacca gacaaagaag
240
agcccaacgg ggccactgga ccgagaggcc cttttgcagt acttgagca acaggcacta
300
gaagtcaaag agcgtgatga cttggtgccc ttcacaggcg agaagaagg gaaaccctat
360
attcagccca agagggaaat cccagcagag gagcagatca ccctggagcc tgagctggag
420
gaggcactgg cacatgccac agatgctgaa atgtgtgaca ttgcagcaat tctggacatg
480
tacacactga tgagtaacaa gcaatactat gatgccctct gcagtggaga aatctgcaac
540
actgaaggca ttagcagtgt ggtacagcct gacaagtata agccagtgcc ggatgaaccc
600
ccaaatccca caaacattga ggagatacta aagagggtcc gaagcaatga caaggagctg
660
gaggaggtga acttgaataa tatacaggac atcccaatac ccatgctaag tgagctgtgt
720
gaggcaatga aggcaatac ctatgtgcgg agcttcagtc tggtagccac gaggagtgg
780
gaccccatg ccaatgcagt ggctgacatg ttgcgtgaga atcgtagcct ccagagccta
840
aacatcgaat ccaacttcat tagcagcaca ggactcatgg ctgtgctgaa ggcagttcgg
900
gaaaatgcc cactcactga gctccgtgta gacaatcagc gccagtggcc tggatgatgca
960
gtggagatgg agatggccac cgtgctagag cagtgtccct ctattgtccg ctttggctac
1020
cactttacac agcaggggcc acgagctcgg gcagcccagg ccatgaccgg aaacaatgaa
1080
ctacgtcgcc agcaaaagaa gagataacac tgcatttccc ttaccaact agcgtggga
1140
gcactggaca cttaaatect catctgtcct cctttcctgt aaataaaagc cttctatcc
1200
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
1237

<210> 5728

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5728

Xaa Arg Arg Glu Val Thr Thr Arg Thr Gly Ser Val Ser Thr Thr Gln

tcattggttct cccttctctcc ctgaggacac caaattggat gagagcaagt ttgagagaag
 1020
 aatgaatcaa ctgctatcct tccctcacc cctcagccca ggagggaaaag ggcattttct
 1080
 ttttcatctt tgaaaggcat tgtgggtctg tctttaagt gtttacaaaa aaattatata
 1140
 aaaaaaagtc tagtgtcgac
 1160

<210> 5726

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5726

Ala	Phe	Phe	Pro	Phe	Leu	Pro	Pro	Arg	Leu	Leu	Phe	Asp	Ser	Leu	Pro	1	5	10	15
Leu	Tyr	Ala	Arg	Pro	Ala	Leu	Pro	Leu	Leu	Leu	Arg	Ser	Gly	Gly	Gly	20	25	30	
Ser	Arg	Pro	Pro	Gly	Ser	Arg	Pro	Thr	Ala	His	Gly	Arg	Ala	Trp	Gly	35	40	45	
Ala	Ser	Arg	Ala	Arg	Arg	Pro	Ala	Pro	Gly	Gly	Pro	Phe	Pro	Gly	Val	50	55	60	
Ser	Thr	Asp	Asp	Ser	Ala	Val	Pro	Pro	Pro	Gly	Gly	Ala	Pro	His	Phe	65	70	75	80
Gly	His	Tyr	Arg	Thr	Gly	Gly	Gly	Ala	Met	Gly	Leu	Arg	Ser	Ala	Ser	85	90	95	
Val	Ser	Ser	Val	Ala	Gly	Met	Gly	Met	Asp	Pro	Ser	Thr	Ala	Gly	Gly	100	105	110	
Val	Pro	Phe	Gly	Leu	Tyr	Thr	Pro	Ala	Ser	Arg	Gly	Thr	Gly	Asp	Ser	115	120	125	
Glu	Arg	Ala	Pro	Gly	Gly	Gly	Gly	Ser	Ala	Ser	Asp	Ser	Thr	Tyr	Ala	130	135	140	
His	Gly	Asn	Gly	Tyr	Gln	Glu	Thr	Gly	Gly	Gly	His	His	Arg	Asp	Gly	145	150	155	160
Met	Leu	Tyr	Leu	Gly	Ser	Arg	Ala	Ser	Leu	Ala	Asp	Ala	Leu	Pro	Leu	165	170	175	
His	Ile	Ala	Pro	Arg	Trp	Phe	Ser	Ser	His	Ser	Gly	Phe	Lys	Cys	Pro	180	185	190	
Ile	Cys	Ser	Lys	Ser	Val	Ala	Ser	Asp	Glu	Met	Glu	Met	His	Phe	Ile	195	200	205	
Met	Cys	Leu	Ser	Lys	Pro	Arg	Leu	Ser	Tyr	Asn	Asp	Asp	Val	Leu	Thr	210	215	220	
Lys	Asp	Ala	Gly	Glu	Cys	Val	Ile	Cys	Leu	Glu	Glu	Leu	Leu	Gln	Gly	225	230	235	240
Asp	Thr	Ile	Ala	Arg	Leu	Pro	Cys	Leu	Cys	Ile	Tyr	His	Lys	Ser	Cys	245	250	255	
Ile	Asp	Ser	Trp	Phe	Glu	Val	Asn	Arg	Ser	Cys	Pro	Glu	His	Pro	Ala	260	265	270	

Asp

<210> 5727

<211> 1237

```

1           5           10           15
Leu Lys Ala Arg Lys Asn Val Glu Ser Phe Leu Glu Ala Cys Arg Lys
20           25           30
Met Gly Val Pro Glu Val Trp Gly Leu Leu Ser Lys Glu Trp Trp His
35           40           45
Ala Gly Leu Ser Gly Ala Met Trp His Gly Trp Trp Ala Ser Ile Cys
50           55           60
Ser Gly Cys Leu Leu Ser Asp Glu Gly Thr Gly Cys Pro Cys Leu Pro
65           70           75           80
Gln His Ala Pro Cys Pro Ala Cys Pro Leu Pro Cys Met Ser Pro Val
85           90           95
Leu His Ile Pro Cys Pro Ala Gly Pro Ile Leu Ser Cys Met Ser Pro
100          105          110
Val Leu His Met Pro Cys Pro Ala Leu Leu Leu His Ala
115          120          125

```

<210> 5725

<211> 1160

<212> DNA

<213> Homo sapiens

<400> 5725

```

gctttttttt cttttctccc tccggtcttc ctttttgact ccctcccct ttatgtctgc
60
ccagccctcc ccctgtctgt gagaagtggg ggaggggtctc ggctccagg ttcccgcccc
120
accgcgcacg ggcgagcatg gggggcaagc agagcacggc gaccgctcc cgggggcccc
180
ttcccggggg tctccaccga tgacagcgcc gtgccgccgc cgggaggggc gcccatttc
240
gggactacc ggacgggagg cggggccatg gggctgcgca gcgcatcggc cagctcggtg
300
gcaggcatgg gcatggaccc cagcacggcc ggggggggtgc ctttggcct ctacaccccc
360
gcctcccggg gcaccggcga ctccgagagg gcgcccggcg gcggagggtc tgcgtccgac
420
tccacctatg cccatggcaa tggttaccag gagacggcg gcggtacca tagagacggg
480
atgctgtacc tgggtcccg agcctcgtg gcggatgtc tacctctgca catcgacccc
540
aggtgggtta gctcgcatag tggtttcaag tgccccattt gctccaagtc tgtggcttct
600
gacgagatgg aaatgcactt tataatgtgt ttgagcaaac ctgcctctc ctacaacgat
660
gatgtgctga ctaagacgc gggtagtgt gtgatctgcc tggaggagct gctgcagggg
720
gacacgatag ccaggctgcc ctgcctgtgc atctatcaca aaagctgcat agactcgtgg
780
tttgaagtga acagatcttg tccggaacac cctgcggact gacctgcggg cttgcttgct
840
gactcctctc aaaggacag agcggccctg ctccaggag gaggctcacc ggaccctggg
900
gcagagctga gcttgggaca ccagcgggaa cagggcaccc cttctgcact gacttccaga
960

```

ttggtgaaca ccagctttaa ggaagatggc ccagactata cagaacacct gccatgccct
 240
 tgagactgca gactttcatc tacaacagtg gttaatgtaa aagagtagtt atgggtgtaaa
 300
 ctggtgaatt tcttcttccc tttgtatttc taattgacct ttcctccctg taaagaaaag
 360
 aattttcaag caggtaggat atgctctctt tttctgtaca
 400

<210> 5722

<211> 80

<212> PRT

<213> Homo sapiens

<400> 5722

Leu	Asp	Ile	Ala	Asn	Gln	Thr	Gly	Arg	Ser	Ile	Arg	Ile	Pro	Pro	Ser
1				5				10					15		
Glu	Arg	Lys	Ala	Leu	Met	Leu	Ala	Met	Gly	Tyr	His	Glu	Lys	Gly	Arg
			20				25					30			
Ala	Phe	Leu	Lys	Arg	Lys	Glu	Tyr	Gly	Ile	Ala	Leu	Pro	Cys	Leu	Leu
			35				40				45				
Asp	Ala	Asp	Lys	Tyr	Phe	Trp	Trp	Ala	Leu	Leu	Tyr	Leu	Val	Asn	Thr
	50					55			60						
Ser	Phe	Lys	Glu	Asp	Gly	Pro	Asp	Tyr	Thr	Glu	His	Leu	Pro	Cys	Pro
65					70				75					80	

<210> 5723

<211> 376

<212> DNA

<213> Homo sapiens

<400> 5723

nntaccacat tttcttcttt tcacccaccc cagccaaaac tcagtgcctt caaggctcgg
 60
 aagaatgtgg agagttttct agaagcctgt cgaaaaatgg ggggtgcctga ggtatggggg
 120
 ctgctttcta aagagtgggtg gcattgccga ctcagcggag ccatgtggca tggatgggtg
 180
 gtttcattt gcagcggatg tctgctctca gatgaaggca caggctgccc ctgcctgccc
 240
 cagcatgccc cctgcctgc atgccccctg ccctgcatgt cacctgtcct acacatcccc
 300
 tgccctgcag gcccattctt gtctgcatg tcacctgtcc tgcacatgcc ctgccctgca
 360
 ctctcctgc acgcgt
 376

<210> 5724

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5724

Xaa Thr Thr Phe Ser Ser Phe His Pro Pro Gln Pro Lys Leu Ser Ala


```

      130              135              140
Phe His Tyr Ala Val Asp Asn Leu Gly Ala Asp Ala Ile Ala Thr Gly
145              150              155              160
His Tyr Ala Arg Thr Ser Leu Glu Asp Glu Glu Val Phe Glu Gln Lys
      165              170              175
His Val Lys Lys Pro Glu Gly Leu Phe Arg Asn Arg Phe Glu Val Arg
      180              185              190
Asn Ala Val Lys Leu Leu Gln Ala Ala Asp Ser Phe Lys Asp Gln Thr
      195              200              205
Phe Phe Leu Ser Gln Val Ser Gln Asp Ala Leu Arg Arg Thr Ile Phe
      210              215              220
Pro Leu Gly Gly Leu Thr Lys Glu Phe Val Lys Lys Ile Ala Ala Glu
225              230              235              240
Asn Arg Leu His His Val Leu Gln Lys Lys Glu Ser Met Gly Met Cys
      245              250              255
Phe Ile Gly Lys Arg Asn Phe Glu His Phe Leu Leu Gln Tyr Leu Gln
      260              265              270
Pro Arg Pro Gly His Phe Ile Ser Ile Glu Asp Asn Lys Val Leu Gly
      275              280              285
Thr His Lys Gly Trp Phe Leu Tyr Thr Leu Gly Gln Arg Ala Asn Ile
      290              295              300
Gly Gly Leu Arg Glu Pro Trp Tyr Val Val Glu Lys Asp Ser Val Lys
305              310              315              320
Gly Asp Val Phe Val Ala Pro Arg Thr Asp His Pro Ala Leu Tyr Arg
      325              330              335
Asp Leu Leu Arg Thr Ser Arg Val His Trp Ile Ala Glu Glu Pro Pro
      340              345              350
Ala Ala Leu Val Arg Asp Lys Met Met Glu Cys His Phe Arg Phe Arg
      355              360              365
His Gln Met Ala Leu Val Pro Cys Val Leu Thr Leu Asn Gln Asp Gly
      370              375              380
Thr Val Trp Val Thr Ala Val Gln Ala Val Arg Ala Leu Ala Thr Gly
385              390              395              400
Gln Phe Ala Val Phe Tyr Lys Gly Asp Glu Cys Leu Gly Ser Gly Lys
      405              410              415
Ile Leu Arg Leu Gly Pro Ser Ala Tyr Thr Leu Gln Lys Gly Gln Arg
      420              425              430
Arg Ala Gly Met Ala Thr Glu Ser Pro Ser Asp Ser Pro Glu Asp Gly
      435              440              445
Pro Gly Leu Ser Pro Leu Leu
      450              455

```

<210> 5721

<211> 400

<212> DNA

<213> Homo sapiens

<400> 5721

ttagacatag ctaaccagac aggcagatca atcagaattc ccccatcaga aagaaaagcc
60

cttatggttag ctatgggata tcatgagaag ggcagagctt tcctgaaaag aaaagaatat
120

ggaatagcct tgccatgtct gttggacgct gacaaatatt tctggtgggc gcttttgtac
180

cactttatatt ccatagaaga caataagggtt ctgggaacac ataaagggtg gttcctgtat
 1440
 accttggggc agagagcaaa cataggtggc ctgagagagc cctgggtacgt ggtggagaag
 1500
 gacagcgta aggggtgacgt gtttgtggcc ccccgacag accaccagc cctgtacagg
 1560
 gacctgctga ggaccagccg cgtgcactgg attgctggagg agcctccgc agcactggtc
 1620
 cgggacaaga tgatggagtg ccacttccga ttccgccacc agatggcact agtgcctgt
 1680
 gtgctgaccc tcaatcaaga tggcaccgtg tgggtgacag ctgtgcaggc tgtgctgccc
 1740
 cttgccacag gacagtttgc tgtgttctac aagggggacg agtgcctggg cagcgggaag
 1800
 atcctgctgc tggggccgtc tgcttacacg ctccagaagg gccagcgag agctgggatg
 1860
 gccactgaga gccccagtga cagcccagaa gatggtccag gcctgagtcc cttgctctga
 1920
 cagagatgga tctgctagaa ggaacctgga gagcaggacc catggctggg cggctggtga
 1980
 gcagtccagg tgcccaaggg ccagcttctg gctgcccaga gcagaggaag cgggctggc
 2040
 tgagggtccg aaaagcctgc agggggcccg cgagccccag gaagagcctc agctccaggc
 2100
 tggggctctg gctgctggag catctgctgg ctggtggggg ggcccagatt ccccttcacc
 2160
 gccccaggg agggtttccc acctcagagt acaccgaggg gacctgcaga gggggctgtc
 2220
 gggacagcgt ggaataaaca ttatttcaag gaaaaaaaa aaaaaaa
 2267

<210> 5720

<211> 455

<212> PRT

<213> Homo sapiens

<400> 5720

Val	Pro	Val	Leu	His	Lys	His	Pro	Cys	His	Leu	Val	Thr	Ser	Pro	Pro
1				5					10					15	
Gln	Gln	Gln	Arg	Gly	His	Gly	Ala	Val	His	Ala	Ala	Gly	Gln	Gly	Ala
			20					25					30		
His	Asp	Val	Pro	Gln	Gly	Leu	His	Pro	Pro	Val	Ala	Pro	Ser	Gly	Gly
		35					40					45			
Val	Asp	Ser	Ala	Val	Ala	Ala	Leu	Leu	Leu	Arg	Arg	Arg	Gly	Tyr	Gln
	50					55					60				
Val	Thr	Gly	Val	Phe	Met	Lys	Asn	Trp	Asp	Ser	Leu	Asp	Glu	His	Gly
65					70				75					80	
Val	Cys	Thr	Ala	Asp	Lys	Asp	Cys	Glu	Asp	Ala	Tyr	Arg	Val	Cys	Gln
			85					90					95		
Ile	Leu	Asp	Ile	Pro	Phe	His	Gln	Val	Ser	Tyr	Val	Lys	Glu	Tyr	Trp
			100				105					110			
Asn	Asp	Val	Phe	Ser	Asp	Phe	Leu	Asn	Glu	Tyr	Glu	Lys	Gly	Arg	Thr
		115					120					125			
Pro	Asn	Pro	Asp	Ile	Val	Cys	Asn	Lys	His	Ile	Lys	Phe	Ser	Cys	Phe

225

<210> 5719

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 5719

ntgtcagcag agccctgtac cgtgcgcctc agcaaactcc tccatctatt gctccaaggc
60
ccgcctttga tgtaggtcc tggagaaggg gaagtgggtc gggaccaca ggtccagctg
120
ctccgtgcc tgcagtcggg aaagggaac aggcactaat caaaggcaac tgctcactcg
180
tacctctttc ttctgaagca catgatgaag tctattctca gcagcgattt tctttacaaa
240
ctctttcggt aatcccccca gagggaagat ggttctcctc agggcatcct gggaaacctg
300
gcatttctaa cttcaaaccg atttctgaaa agcccttcgg gcttcttaac gtgcttctgc
360
tcaaagactt cttcatcttc cagggaagtt cttgcatagt gacctgtggc aatggcatct
420
gcccctgaac acatcattcc aatactcctt tacgtaggac acttgatgga aagggatgtc
480
taagatctgg caaactctgt aagcatcttc acagtctttg tcggcagtac agaccccatg
540
ttcatccagt gagtcccagt tcttcataaa caccctgtc acctggtaac ctctccgct
600
cagcagcagc gcggccacgg cgctgtccac gccgccggac agggcgaca cgacgtgccg
660
caaggcctgc atccgccagt cgcctcgtcc ggcggcgtgg acagcgccgt ggccgcgtg
720
ctgctgaggc ggagaggta ccaggtgaca ggggtgttta tgaagaactg ggactcactg
780
gatgaacatg gggctgttac tgccgacaaa gactgtgaag atgcttacag agtttgccag
840
atcttagaca tccctttcca tcaagtgtcc tacgtaaagg agtattggaa tgatgtgttc
900
agtgaacttt tgaatgagta tgaaaaagga aggactccca atcctgacat agtttgcaac
960
aagcacatca aatttagttg cttttttcat tatgctgtgg ataactttg ggcagatgcc
1020
attgccacag gtcactatgc aagaacttcc ctggaagatg aagaagtctt tgagcagaag
1080
cacgttaaga agcccgaagg gcttttcaga aatcggtttg aagttagaaa tgcggtaaaa
1140
ctcctccagg cagctgacag ctttaaagac cagaccttct ttctcagcca ggtttcccag
1200
gatgccctga ggagaaccat cttccctctg gggggattaa cgaaagagtt tgtaaagaaa
1260
atcgctgctg agaatagact tcatcatgtg cttcagaaga aagagagcat gggcatgtgt
1320
ttcatcggga agaggaattt tgaacatttc cttcttcagt atctgcagcc tcgacctggg
1380

ctgatctcca tectgggtgg cctctgcctc tgctccgcct gctgctgcgg ctctgacgag
 960
 gaccagccg ccagcgcccg gggccctac caggctcccg tgtccgtgat gcccgctgcc
 1020
 acctcggacc aagaaggcga cagcagcttt ggcaaatacg gcagaaacgc ctacgtgtag
 1080
 cagctctggc ccgtggggcc cgctgtcttc ccactgcccc aaggagaggg gacctggccg
 1140
 gggcccatc ccctatagta acctcagggg ccggccacgc cccgctccc tagccccgcc
 1200
 ccggccacg ccccggtgtc tgcactctca tggcccctcc aggccaagaa ctgctcttgg
 1260
 gaagtgcgcat atctccccctc tgaggctgga tccctcatct tctgacctg ggttctgggc
 1320
 tgtgaagggg acggtgtccc cgcacgtttg tattgtgtat aaatacattc attaataaat
 1380
 gcatattgtg accgttaaaa aaaaaaaaaa aaaaaaaaaa
 1419

<210> 5718

<211> 228

<212> PRT

<213> Homo sapiens

<400> 5718

Met	Ser	Met	Ala	Val	Glu	Thr	Phe	Gly	Phe	Phe	Met	Ala	Thr	Val	Gly
1				5				10						15	
Leu	Leu	Met	Leu	Gly	Val	Thr	Leu	Pro	Asn	Ser	Tyr	Trp	Arg	Val	Ser
			20					25					30		
Thr	Val	His	Gly	Asn	Val	Ile	Thr	Thr	Asn	Thr	Ile	Phe	Glu	Asn	Leu
		35					40					45			
Trp	Phe	Ser	Cys	Ala	Thr	Asp	Ser	Leu	Gly	Val	Tyr	Asn	Cys	Trp	Glu
	50					55				60					
Phe	Pro	Ser	Met	Leu	Ala	Leu	Ser	Gly	Tyr	Ile	Gln	Ala	Cys	Arg	Ala
65				70					75					80	
Leu	Met	Ile	Thr	Ala	Ile	Leu	Leu	Gly	Phe	Leu	Gly	Leu	Leu	Leu	Gly
			85					90					95		
Ile	Ala	Gly	Leu	Arg	Cys	Thr	Asn	Ile	Gly	Gly	Leu	Glu	Leu	Ser	Arg
			100					105					110		
Lys	Ala	Lys	Leu	Ala	Ala	Thr	Ala	Gly	Ala	Leu	His	Ile	Leu	Ala	Gly
		115					120					125			
Ile	Cys	Gly	Met	Val	Ala	Ile	Ser	Trp	Tyr	Ala	Phe	Asn	Ile	Thr	Arg
	130						135					140			
Asp	Phe	Phe	Asp	Pro	Leu	Tyr	Pro	Gly	Thr	Lys	Tyr	Glu	Leu	Gly	Pro
145					150					155				160	
Ala	Leu	Tyr	Leu	Gly	Trp	Ser	Ala	Ser	Leu	Ile	Ser	Ile	Leu	Gly	Gly
			165					170					175		
Leu	Cys	Leu	Cys	Ser	Ala	Cys	Cys	Cys	Gly	Ser	Asp	Glu	Asp	Pro	Ala
			180					185					190		
Ala	Ser	Ala	Arg	Arg	Pro	Tyr	Gln	Ala	Pro	Val	Ser	Val	Met	Pro	Val
		195					200					205			
Ala	Thr	Ser	Asp	Gln	Glu	Gly	Asp	Ser	Ser	Phe	Gly	Lys	Tyr	Gly	Arg
	210					215					220				
Asn	Ala	Tyr	Val												

[illegible]

<210> 5717

<211> 1419

<212> DNA

<213> Homo sapiens

<400> 5717

60	gggcccctcc	ttggctgtat	ccgtcagtgg	ctccagggtg	agtctgcccc	ccccacctc
120	gtggggcggg	gagcccgggg	cagcccagag	gctgggggaa	gggggtggac	ttttggcccc
180	tttcggttat	tccctccatc	tcgtcaacag	ctgccgcgcg	caggcttagc	tcattcctct
240	gacctgccag	gaagcagaga	gacccacaga	gcaggaggga	ggcagaaagt	ggagacggac
300	ctgagcccga	ggaagaggca	ggcagaggct	gaggctgatt	ccaccccagc	ctgcctggac
360	aaccctcctt	agccgcagcc	ccttcagtt	ccctaggggt	tctgccctc	ccctctctcg
420	gggcaccagc	cccccagggt	cctgcattcc	accatgtcga	tggctgtgga	aacctttggc
480	ttcttcatgg	caactgtggg	gctgctgatg	ctgggggtga	ctctgccaaa	cagctactgg
540	cgagtgtcca	ctgtgcacgg	gaacgtcatc	accaccaaca	ccatcttcga	gaacctctgg
600	tttagctgtg	ccaccgactc	cctgggcgtc	tacaactgct	gggagtccc	gtccatgctg
660	gccctctctg	ggtatattca	ggcctgcctg	gcactcatga	tcaccgccat	cctcctgggc
720	ttcctcggcc	tcttgctagg	catagcgggc	ctgcgtgca	ccaacattgg	gggcctggag
780	ctctccagga	aagccaagct	ggcggccacc	gcagggggcc	tccacattct	ggcgggtatc
840	tgcgggatgg	tggccatctc	ctggtaacgc	ttcaacatca	cccgggactt	cttcgacccc
900	ttgtaccccg	gaaccaagta	cgagctgggc	cccgcctct	acctgggggtg	gagcgccctca

tggggtttga ggggtggatga ttggtgacgg aggggtgtatc ttcaggagga ggttcgagtg
 240
 aagatcaaag acttgaatga acacattggt tgctgcctat gcgccggcta cttcgtggat
 300
 gccaccacca tcacagagtg tcttcatact ttctgcaaga gttgtattgt gaagtacctc
 360
 caaactagca agtactgccc catgtgcaac attaagatcc acgagacaca gccactgctc
 420
 aacctcaaac tggaccgggt catgcaggac atcgtgtata agctggtgcc tggcttgcaa
 480
 gacagtgaag agaaacggat tcgggaattc taccagtccc gaggtttgga cggggtcacc
 540
 cagcccactg gggaagagcc agcactgagc aacctcggcc tccccctcag cagctttgac
 600
 cactctaaag cccactacta tcgctatgat gagcagttga acctgtgcct ggagcggctg
 660
 aggtgaggag aaggtcaggg gttgcaggag gtgacagtgc caatgacca gagccagggg
 720
 ggggtctagg gagaggctga gcagtgagtg agtgcctatc cccttgaaga gagtatatca
 780
 tggctctggg tggggaagag gaggaaagat aggattccct aacctgtgtc tatttcccc
 840
 cagttctggc aaagacaaga ataaaagcgt cctgcaggtg agaagggtg aggggagggc
 900
 ctctctaagg agactcacct cccatggtec ttccctcaca caccttgccc tcttccctcc
 960
 cctccctgct ccagaacaa gtatgtccga tgttctgtta gagctgaggt acgccatctc
 1020
 cggaggggtc tgtgtcaccg cttgatgcta aacctcagc atgtgcagct cctttttgac
 1080
 aatgaagttc tccctgatca catgacaatg aagcagatat gcctctcccg ctgggttcggc
 1140
 aaggtaagcc aggccaccct ccctgggac acacccctt cagactcccc ccaaccatcc
 1200
 tacagtctc aggggaaggg tgggctgagg ggccctttga ataataaag aacattcccc
 1260
 acgtactcca acttctcat tctctctta gccatccct ttgcttttac aataaagtgt
 1320
 gaaagagaag aggaggtagg ggccaagccc ccacccatc ccactccct tccctcccca
 1380
 gatatttatg tgaaatgaac tgcagcttta tttttgaaa taaaaacttt taaaaagcaa
 1440
 aaaaaaaaaa aaaaaaaaa
 1458

<210> 5716

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5716

Leu Gln Glu Glu Val Arg Val Lys Ile Lys Asp Leu Asn Glu His Ile
 1 5 10 15
 Val Cys Cys Leu Cys Ala Gly Tyr Phe Val Asp Ala Thr Thr Ile Thr

```
<210> 5715
<211> 1458
<212> DNA
<213> Homo sapiens
```

4880

acaacattaa cacagaatgc cagttcatca gcagccgact cacggagtgg tcgaaagagc
 1020
 aaaaacaaca acaagtcttc aagccagcag tcatcatctt cctcctcctc ttcttcctta
 1080
 tcatcgtggt cttcatcatc aactgttgta caagaaatct ctcaacaaac aactgtagtg
 1140
 ccagaatctg attcaaatac tcagggtgat tggacttacg acccaaatac acctcgatac
 1200
 tgcatttgta atcagggtatc ttatgggtgag atgggtgggat gtgataacca agattgccct
 1260
 atagaatggt tccattatgg ctgcgttgga ttgacagagg caccaaaagg caaatggtag
 1320
 tgtccacagt gcactgctgc aatgaagaga agaggcagca gacacaaata aagggtggtcc
 1380
 ttttggttga tgaagaaata aacttcagct gaagatttta tataggactt taaaaagaag
 1440
 agaagagaaa gaagaacaa tgcatttcca ggcaaccact taaaggattt acatagacaa
 1500
 tcctataaga tcttgaactt gaattttatg ggttgatttt taataatgta agtaaattat
 1560
 ttatgcactc ctggtgtgct atgaatatta ttccagttag ccttggatta tttcagtggc
 1620
 caacatatgc agacatttgt actcctcaac cattttctca aagtaatggg cattctatga
 1680
 tttgacttc aaggaattcc aatgatgaag attttaagga aagtatttta tattcaacag
 1740
 gtatattctg ctgcatgtac tgtactccag agctgttatg taacactgta tataaatggt
 1800
 tgcaaaaaaa aaaaagtcag tgcttctaaa aagaatttaa gataatgggt tttaaaatgc
 1860
 ctttataata agctttgttt ctttgtgaaa ctaattcagc aggctgaagg aaatgggttc
 1920
 tgtgataatg tgggctggta tcctctagag tacctgggta cataaacgga aactcctgtt
 1980
 gggtaaaagt attttg
 1996

<210> 5714

<211> 408

<212> PRT

<213> Homo sapiens

<400> 5714

Ile Glu Gln Leu Pro Met Asp Leu Arg Asp Arg Phe Thr Glu Met Arg
 1 5 10 15
 Glu Met Asp Leu Gln Val Gln Asn Ala Met Asp Gln Leu Glu Gln Arg
 20 25 30
 Val Ser Glu Phe Phe Met Asn Ala Lys Lys Asn Lys Pro Glu Trp Arg
 35 40 45
 Glu Glu Gln Met Ala Ser Ile Lys Lys Asp Tyr Tyr Lys Ala Leu Glu
 50 55 60
 Asp Ala Asp Glu Lys Val Gln Leu Ala Asn Gln Ile Tyr Asp Leu Val
 65 70 75 80
 Asp Arg His Leu Arg Lys Leu Asp Gln Glu Leu Ala Lys Phe Lys Met

Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly
 50 55 60
 Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe
 65 70 75 80
 Val Asp Ile Val Asp Ala Lys Leu Lys Ile Pro Val Ser Gly Ser Lys
 85 90 95
 Ser Glu Gly Leu Leu Tyr Val His Ser Ser Arg Gly Gly Pro Phe Gln
 100 105 110
 Arg Trp His Leu Asp Glu Val Phe Leu Glu Leu Lys Asp Gly Gln Gln
 115 120 125
 Ile Pro Val Phe Lys Leu Ser Gly Glu Asn Gly Asp Glu Val Lys Lys
 130 135 140
 Glu
 145

<210> 5713

<211> 1996

<212> DNA

<213> Homo sapiens

<400> 5713

ncgagcgggt gctgctagcg gaggcgccat attggagggg acaaaactcc ggcgacagcg
 60
 agtgacacaa ataaaccctt ggacccctt gttccctcag ctctaagggc cgcgatgttg
 120
 tacctagaag actatctgga aatgattgag cagcttccta tggatctgcg ggaccgttc
 180
 acggaaatgc gcgagatgga cctgcaggtg cagaatgcaa tggatcaact agaacaaaga
 240
 gtcagtgaat tctttatgaa tgcaaagaaa aataaacctg agtggaggga agagcaaagt
 300
 gcatccatca aaaaagacta ctataaagct ttggaagatg cagatgagaa ggttcagttg
 360
 gcaaaccaga tatatgactt ggtagatcga cacttgagaa agctggatca ggaactggct
 420
 aagtttataaa tggagctgga agctgataat gctggaatta cagaaatatt agagaggcga
 480
 tctttggaat tagacactcc ttcacagcca gtgaacaatc accatgctca ttcacatact
 540
 ccagtggaaa aaaggaaata taatccaact tctcaccata cgacaacaga tcatattcct
 600
 gaaaagaaat ttaaattctga agctcttcta tccaccctta cgtcagatgc ctctaaggaa
 660
 aatacactag gttgtcgaaa taataattcc acagcctctt ctaacaatgc ctacaatgtg
 720
 aattcctccc aacctctggg atcctataac attggctcgt tatcttcagg aactggtgca
 780
 ggggcaatta ccatggcagc tgctcaagca gttcaggcta cagctcagat gaaggaggga
 840
 cgaagaacat caagtttaaa agccagttat gaagcattta agaataatga ctttcagttg
 900
 ggaaaagaat tttcaatggc cagggaaca gttggctatt catcatcttc ggcacttatg
 960

<400> 5711

tgggtgggtggg ggagtatgaa tgtggccttc agagttggat gttataaaac atagtcattt
 60
 ggaagttggg aactttttat ttttgttatc ttgtttttaa tacaggatgt ttgccacacg
 120
 agtcactcga gagaatctct gagtcctggc gagggccttc tgaggcttcg tgtattagca
 180
 gctgttgtct tccaactcag cggcagggtt gcctttcccc acggacactc tggaccttgt
 240
 agtcctcaa gcttccctgt ctattgagca gataggaagc cgtgtcaa atgtggcacc
 300
 ttgaggaaat gcctagtga tgacagacaa cttgcctttg atgattttca agagagttgt
 360
 gctatgatgt ggcaaaagta tgcaggaagc aggcggtcaa tgcctctggg agcaaggatc
 420
 cttttccacg gtgtgttcta tgccgggggc tttgccattg tgtattacct cattcaaaag
 480
 tttcattcca gggctttata ttacaagttg gcagtggagc agctgcagag ccatcccag
 540
 gcacaggaag ctctggggcc tctctcaac atccattatc tcaagctcat cgacagggaa
 600
 aacttcgtgg acattgttga tgccaagttg aagattcctg tctctggatc caaatcagag
 660
 ggcccttctc acgtccactc atccagaggt ggccccttc agaggtggca ccttgacgag
 720
 gtctttttag agctcaagga tggtcagcag attcctgtgt tcaagctcag tggggaaaac
 780
 ggtgatgaag tgaaaaagga gtagagacga ccagaagac ccagcttgct tctagtccat
 840
 ccttccctca tctctaccat atggccactg ggggtggggc ccatctcagt gacagacact
 900
 cctgcaaccc agttttccag ccaccagtgg gatgatggta tgtgccagca catggttaatt
 960
 ttggtgtaat tctaacttgg gcacaacaaa tgctatttgt catttttaaa ctgaatccga
 1020
 aagaaactcc tattataaat ttaagataat gtaatgtatt tgaaagtgtc ttgtataaaa
 1080
 aagcacatga taaaaggaat cagaattaat aaaatgtttg ttgatcttta aaaaaaaaaa
 1140
 1142

<210> 5712

<211> 145

<212> PRT

<213> Homo sapiens

<400> 5712

Met	Trp	Gln	Lys	Tyr	Ala	Gly	Ser	Arg	Arg	Ser	Met	Pro	Leu	Gly	Ala
1				5				10					15		
Arg	Ile	Leu	Phe	His	Gly	Val	Phe	Tyr	Ala	Gly	Gly	Phe	Ala	Ile	Val
		20						25				30			
Tyr	Tyr	Leu	Ile	Gln	Lys	Phe	His	Ser	Arg	Ala	Leu	Tyr	Tyr	Lys	Leu
		35					40					45			

```

      50              55              60
Asn Leu Ser Ser Leu Pro His Asp Leu Phe Thr Pro Leu Arg Tyr Leu
65              70              75              80
Val Glu Leu His Leu His His Asn Pro Trp Asn Cys Asp Cys Asp Ile
      85              90              95
Leu Trp Leu Ala Trp Trp Leu Arg Glu Tyr Ile Pro Thr Asn Ser Thr
      100              105              110
Cys Cys Gly Arg Cys His Ala Pro Met His Met Arg Gly Arg Tyr Leu
      115              120              125
Val Glu Val Asp Gln Ala Ser Phe Gln Cys Ser Ala Pro Phe Ile Met
      130              135              140
Asp Ala Pro Arg Asp Leu Asn Ile Ser Glu Gly Arg Met Ala Glu Leu
145              150              155              160
Lys Cys Arg Thr Pro Pro Met Ser Ser Val Lys Trp Leu Leu Pro Asn
      165              170              175
Gly Thr Val Leu Ser His Ala Ser Arg His Pro Arg Ile Ser Val Leu
      180              185              190
Asn Asp Gly Thr Leu Asn Phe Ser His Val Leu Leu Ser Asp Thr Gly
      195              200              205
Val Tyr Thr Cys Met Val Thr Asn Val Ala Gly Asn Ser Asn Ala Ser
      210              215              220
Ala Tyr Leu Asn Val Ser Thr Ala Glu Leu Asn Thr Ser Asn Tyr Ser
225              230              235              240
Phe Phe Thr Thr Val Thr Val Glu Thr Thr Glu Ile Ser Pro Glu Asp
      245              250              255
Thr Thr Arg Lys Tyr Lys Pro Val Pro Thr Thr Ser Thr Gly Tyr Gln
      260              265              270
Pro Ala Tyr Thr Thr Ser Thr Thr Val Leu Ile Gln Thr Thr Arg Val
      275              280              285
Pro Lys Gln Val Ala Val Pro Ala Thr Asp Thr Thr Asp Lys Met Gln
      290              295              300
Thr Ser Leu Asp Glu Val Met Lys Thr Thr Lys Ile Ile Ile Gly Cys
305              310              315              320
Phe Val Ala Val Thr Leu Leu Ala Ala Ala Met Leu Ile Val Phe Tyr
      325              330              335
Lys Leu Arg Lys Arg His Gln Gln Arg Ser Thr Val Thr Ala Ala Arg
      340              345              350
Thr Val Glu Ile Ile Gln Val Asp Glu Asp Ile Pro Ala Ala Thr Ser
      355              360              365
Ala Ala Ala Thr Ala Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val
      370              375              380
Val Leu Pro Thr Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro
385              390              395              400
Ala His Gly Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His
      405              410              415
Pro Thr Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr
      420              425              430
Lys Asp Lys Val Gln Glu Thr Gln Ile
      435              440

```

<210> 5711

<211> 1142

<212> DNA

<213> Homo sapiens

tccaacgcct cggcctacct caatgtgagc acggctgagc ttaacacctc caactacagc
 720
 ttcttcacca cagtaacagt ggagaccacg gagatctcgc ctgaggacac aacgcgaaaag
 780
 tacaagcctg ttcttaccac gtccactggc taccagccgg catataccac ctctaccacg
 840
 gtgctcattc agactacccg tgtgccaag caggtggcag taccgcgcac agacaccact
 900
 gacaagatgc agaccagcct ggatgaagtc atgaagacca ccaagatcat cattggctgc
 960
 tttgtggcag tgactctgct agctgccgcc atgttgattg tcttctataa acttcgtaag
 1020
 cggcaccagc agcggagtag agtcacagcc gcccggaact ttgagataat ccaggtggac
 1080
 gaagacatcc cagcagcaac atccgcagca gcaacagcag ctccgtccgg tgtatcaggt
 1140
 gagggggcag tagtgctgcc cacaattcat gaccatatta actacaacac ctacaaacca
 1200
 gcacatgggg cccactggac agaaaacagc ctggggaact ctctgcaccc cacagtcacc
 1260
 actatctctg aaccttatat aattcagacc cataccaagg acaaggtaca ggaaactcaa
 1320
 atatgactcc cctcccccaa aaaaacttat aaaatgcaat agaatgcaca caaagacagc
 1380
 aacttttgta cagagtgggg agagactttt tcttgatat gcttatatat taagtctatg
 1440
 ggctgggtta aaaaaacaga ttatattaaa atttaaagac aaaaagtcaa acaaaaaata
 1500
 ttttctaact tgtaagttct atttaaagg ggtggggggg aatcttgga acgttggtgg
 1560
 gtacaagcca caagttaact tgctatgctg ccagaaggga tttctggtat aaggttgaaa
 1620
 ttgctgagat aaaataaact aaaacaacaa acatccttaa agaggtaggg tgtgggctgc
 1680
 tgagggggca agagggatag actgaatctg tcatttttta gaagatgctt cataggacac
 1740
 aggactatcc atttctacag acatctttct taagccgaga gctgtctttg cagaattatc
 1800
 ttatt
 1805

<210> 5710

<211> 441

<212> PRT

<213> Homo sapiens

<400> 5710

Asn	Leu	Thr	Pro	Leu	Val	Asp	Met	Glu	Glu	Leu	Glu	Met	Ser	Gly	Asn
1				5				10					15		
His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly	Leu	Ser	Ser	Leu
			20				25					30			
Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser	Leu	Ile	Glu	Arg	Asn
		35				40					45				
Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu	Leu	Asn	Leu	Ala	His	Asn

```
<210> 5709
<211> 1805
<212> DNA
<213> Homo sapiens
```

```

<400> 5709
aatctcaccc ccctggtgga catggaggag ctggagatgt cagggaaacca cttccctgag
60
atcaggcctg gctccttcca tggcctgagc tccctcaaga agctctgggt catgaactca
120
caggtcagcc tgattgagcg gaatgctttt gacgggctgg cttcacttgt ggaactcaac
180
ttggcccaca ataacctctc ttctttgccc catgacctct ttaccccgct gaggtacctg
240
gtggagttgc atctacacca caacccttgg aactgtgatt gtgacattct gtggctagcc
300
tggtggcttc gagagtatat acccaccaat tccacctgct gtggccgctg tcatgctccc
360
atgcacatgc gaggcgcgta cctcgtggag gtggaccagg cctccttcca gtgctctgcc
420
cccttcatca tggacgcacc tcgagacctc aacatttctg agggtcggat ggcagaactt
480
aagtgtcgga ctccccctat gtcctccgtg aagtggttgc tgcccaatgg gacagtgtct
540
agccacgcct cccgccaccc aaggatctct gtcctcaacg acggcacctt gaacttttcc
600
cacgtgctgc tttcagacac tgggggtgtac acatgcatgg tgaccaatgt tgcaggcaac
660

```

acaacatatt gcataggttaa gatcctcgat ctgggtgttct ctgcgtggct gttagggact
 6840
 gtatatcttg taaaagaaca cttgtcacat gcttgatcag ttacagcaat agctgaagaa
 6900
 acatttcctc aaatgtatta tttaacagg aatcatgttc taatttccca tcctttaatt
 6960
 ttaataaaaag ctgaactgtg tgaaaaaa
 6988

<210> 5708

<211> 506

<212> PRT

<213> Homo sapiens

<400> 5708

Asp	Met	Ser	Glu	Ser	Lys	Ala	Lys	Lys	Ile	Glu	Ile	Lys	Asp	Val	Asp
1				5					10					15	
Gly	Gln	Thr	Leu	Ser	Lys	Leu	Ile	Asp	Tyr	Ile	Tyr	Thr	Ala	Glu	Ile
			20					25					30		
Glu	Val	Thr	Glu	Glu	Asn	Val	Gln	Val	Leu	Leu	Pro	Ala	Ala	Ser	Leu
			35				40						45		
Leu	Gln	Leu	Met	Asp	Val	Arg	Gln	Asn	Cys	Cys	Asp	Phe	Leu	Gln	Ser
			50				55				60				
Gln	Leu	His	Pro	Thr	Asn	Cys	Leu	Gly	Ile	Arg	Ala	Phe	Ala	Asp	Val
65					70					75				80	
His	Thr	Cys	Thr	Asp	Leu	Leu	Gln	Gln	Ala	Asn	Ala	Tyr	Ala	Glu	Gln
				85					90					95	
His	Phe	Pro	Glu	Val	Met	Leu	Gly	Glu	Glu	Phe	Leu	Ser	Leu	Ser	Leu
			100					105					110		
Asp	Gln	Val	Cys	Ser	Leu	Ile	Ser	Ser	Asp	Lys	Leu	Thr	Val	Ser	Ser
			115					120					125		
Glu	Glu	Lys	Val	Phe	Glu	Ala	Val	Ile	Ser	Trp	Ile	Asn	Tyr	Glu	Lys
			130				135					140			
Glu	Thr	Arg	Leu	Glu	His	Met	Ala	Lys	Leu	Met	Glu	His	Val	Arg	Leu
145					150					155				160	
Pro	Leu	Leu	Pro	Arg	Asp	Tyr	Leu	Val	Gln	Thr	Val	Glu	Glu	Glu	Ala
				165					170					175	
Leu	Ile	Lys	Asn	Asn	Asn	Thr	Cys	Lys	Asp	Phe	Leu	Ile	Glu	Ala	Met
			180					185					190		
Lys	Tyr	His	Leu	Leu	Pro	Leu	Asp	Gln	Arg	Leu	Leu	Ile	Lys	Asn	Pro
			195				200					205			
Arg	Thr	Lys	Pro	Arg	Thr	Pro	Val	Ser	Leu	Pro	Lys	Val	Met	Ile	Val
			210				215					220			
Val	Gly	Gly	Gln	Ala	Pro	Lys	Ala	Ile	Arg	Ser	Val	Glu	Cys	Tyr	Asp
225					230					235				240	
Phe	Glu	Glu	Asp	Arg	Trp	Asp	Gln	Ile	Ala	Glu	Leu	Pro	Ser	Arg	Arg
				245					250					255	
Cys	Arg	Ala	Gly	Val	Val	Phe	Met	Ala	Gly	His	Val	Tyr	Ala	Val	Gly
			260					265					270		
Gly	Phe	Asn	Gly	Ser	Leu	Arg	Val	Arg	Thr	Val	Asp	Val	Tyr	Asp	Gly
			275				280					285			
Val	Lys	Asp	Gln	Trp	Thr	Ser	Ile	Ala	Ser	Met	Gln	Glu	Arg	Arg	Ser
			290				295				300				
Thr	Leu	Gly	Ala	Ala	Val	Leu	Asn	Asp	Leu	Leu	Tyr	Ala	Val	Gly	Gly

catctacaaa gttgcagtat tatgcaaata aaactgacct cattttctgc tatgcaataa
5220
gaatacttaa ttctagttcc cgacaagcca gttgcaatat cccctaagat gctttttgag
5280
ctgtcttact ttgatatctg ttgtgtaacg tttgtatatt tctgagccag atcctttcaa
5340
agattgcctt tttataaaat tgaagctata gcttttaggc taaaatttta acgtagatat
5400
ttttataaga ttttttttcc aagagtttga atcgcttttt attgtccatg gtaatgaaat
5460
gttgtgttct ttgcatcatt cactctcaaa cgtagttcat gcctgtagct ctcttccttt
5520
tgtttctcac ccttcagaaa catatttttc agtagctcca ggtagatgag cctttttttt
5580
ttttttttta aataccatat tcaaggaggt ctgctgaatt ttaaaacgca gtcactgggtg
5640
tttcttgaat tgctagggac tgatgttatg ttcgactcag cacttgcccg tctgtattga
5700
ttgtgtcttt tttttttttt ttttgaggtc tgctttctgt ggggggtgagg ccgggctgtc
5760
tcgtgggtggc tccactgac gggcactgag cctggtacct tgtggcatgg agaagcctca
5820
gggaaaggcc tgcccccca gcacatactc ccatagtgtc ctaggtccag ccgaccattc
5880
cttattctct tctatctcct tgttgatctg aagcttccaa tagcttgagg cctttgctgc
5940
tggatgatgc cctttttggg agcatcttgt ctctaaccct taaaagaggg gtcaatcctc
6000
atgatccctg tgtgttaagc atatgctttg cagggtgctca cactacactt acaacttgct
6060
tcttgageta tgtctctact ccaggctctg ttttgtgtat ttatctgcca tttgcatcat
6120
ggttttttaa atttattatt attattatta ttgttgggac aggtgccatt taaattgcct
6180
ccatgctccc catttgacc tagctggatc aagttgggag gctgagcaaa ctcatattcc
6240
agtttagttg agtttttaa ggctctgttt gcctggagaa gcaaggaggt tagaatgtaa
6300
tttttttaag cgtttgact atttagagtc ctaagcccct catgttcagc tgtgtgtgt
6360
ttctactgac caagcaggag agccagcagc acttccagca tttgggaatg gaagagattt
6420
cttctgtagt ggataattgc agcctcatag cccctgtgca gccttcgtca tgggactcag
6480
tgactcatgg atatagcacc agccatggca ggaatgcaca ggactgtggc atttgacgca
6540
tcaaatcacc ctagtgccat gtttggttat gagattgtaa attattcgct ccccgctcct
6600
cccctcccct cattttcagt ggcaatagag gacccttgtt gtacttcttg ttaatttgc
6660
atattatgtg taaaatgctt tcgttgaaag aaaactgaag aactgaatg tgtatgtctg
6720
tgtgggtgct ctgtccctgt ggtgtcata gccagtcaga cttgatcact gacaccccg
6780

ggcccttggc actttgtgac agtgggtcaag tctgtctaat gtccttgtct tctttttctt
3600
gtgctttccc cctattccag ggtgtgcacc ctctcccaa cccccaagaa cccactact
3660
gctttccctg tgaggtagga gatatcagtg ggtcttggat ttgaggcttc ctaagatgtg
3720
cttgcathtt aaaaaggag cttgggtgaga gctttgctaa ttcacaggta aaaattatta
3780
acaatagaac ttcaagcatc ttgaggagcg ggcatttgag ggggcatgga gtaatttgta
3840
tttaaaaaac cttaaagttg tgctgttctt aaactagcaa attgctcatg ctgaaatttc
3900
tggcataagc aggggaagtc ttgtgtctgg agaatagtct cataccttgc agtctgggac
3960
accctcccta ctttgagaat ccacctacag gaagccaagg aactttataa atcctgatgt
4020
tggacttctg atacgactgg gctacttcca agcagggtgct gcaggagatt ggcaccccc
4080
agccctgca gttagaaacc ccgaagtctt ccagccagt gagccacttt gtgtatttac
4140
tgtatattta ttgtgcccta aatgtgcaac tctcctaaag aaaaaacttc tctttctgat
4200
gttaagcaca tgttacttca acaagatgct tggagaacaa caaggtaccc agaattttta
4260
gaagccttca gaagaggcta aaatatccag ctttggggga cctggaagaa atgtctccaa
4320
aggaagcaag gcatgtttta gttgagtgtc ctggtctcac tatgaagtgg ggatgactgt
4380
ggcttcataa ctctacctgg ctgtgggttg gaagctgatg gaatgagaaa tgtcctttct
4440
ccttctctga ggaaattttg agacttgttt cgggtgtgtct gtgtgatggg gatgaggctg
4500
gggttgggat ctgatgtatg ccattcacag aagctctcaa tttcagatga taggtgaatt
4560
ccctgcccc cccccaccac tgagaagcta gactttcatg cgggagaggc tacttttatg
4620
tgtcgtcttc cggggaaggg tccctccact gaaagctagc cagtcatgtt ttctgttttt
4680
ggatttttgc aattggtttc acctcatgtc tccctcccta caaagcactg cctctactgg
4740
gcgtgctgcc aaggccatgt gcactccatc ctcatgtatc ctttttcacg gggaccagaa
4800
cactggtacg tcatcaccaa agccaatctg ctctagctgc ccacagatgc caccaaaacc
4860
tgctatctct tcatcaccag gtacgattct ctttcacag tggacacagc aggctatttt
4920
ctagtttgtg ctggtcacgt ggtagatgaa gcctcttact gcccactta gggtgggcac
4980
ggctgcttgt gaatgcagct ttgccagtgg catatctgtc atctgattgc ggtggtgaaa
5040
tggaattgag gccaagggtt agaagcagcc gagacgccac ttggatactg atttgaacaa
5100
tgtagaagtc agattctgaa ttccaaagtt atttctcata agtaccat ggcactctct
5160

gtgggtgtgg gcgttgtgga ggggaagcta tatgctgttg ggggttatga tggagcttcc
1980
cgccagtgtc tgagcactgt ggagcagtac aaccagcga ccaatgaatg gatatacgtg
2040
gcggacatga gcacccgccg cagtggcgca ggggttggag tgcttagcgg acagctgtac
2100
gccacaggtg ggcattgatg gcctttgttg aggaagagcg ttgaggttta cgatcctgga
2160
acaaatacct ggaagcaagt ggcagacatg aacatgtgcc ggcgcaacgc aggggtctgt
2220
gcagtaaatt ggctcctgta tgtggttggg ggggatgatg gatcctgcaa cttggcttcc
2280
gtggagtact acaatcctgt cactgacaaa tggacgctgc ttccaacgaa catgagcacg
2340
ggcggagct atgcaggtgt tgccgtgatt cacaagtcct tgtgaccaa actcctactg
2400
ccaggaggtg gaggaaggag caggtgctgc ctgtgactct gaacagcagg accttggtga
2460
ctggattcaa cttgcttggg agggctctgt ctgtgtgag aaccgctctc ctctgacttg
2520
gcagactggg gttgttcacg gcagtgtgga caccattacc caccgccgtt cccctgaggt
2580
gctctggcct atgccctgag caaggggggt cttgacatcc ccaggcagca cctttggggt
2640
ttgttttggg gtttctacag ggacaataca gaccctggag tgtgtgtgtg tgtgtgtgtg
2700
tgtagaccat ggtgtttctc tatgtttctc taagttgggg ggtgagcgtg tgtgacagtc
2760
tactggattt ctttactact gatcctttct ctgtgttaaa aatcaagtca cagagacctc
2820
tcttctggat ttgtcccatg gggaccctga gactactaaa gctgctttct tctgaaggtc
2880
cagttggaca gtctgggaat gtccagaaat aaccagttag aggggcagtt ctctggccac
2940
accacttat gtactttaac tactgtgact ttgtctgcag aagagctgga aaattctcga
3000
agctgcaccg tgctctctgt gtgctagaat aagggaacaa tgggttcctt gtgcttctca
3060
gctcactgtt tttccttgag ttctctaca ggaagcagat gagaactgcc cagtcttcag
3120
gtttaggcca ttggtctttg atgtcataga ttccaggcct gggaggtgtt atgtctcttc
3180
agctgggaaa actagctctt cagagaagcc tcgggtaaca ctgaaaaaca aaacaaaaca
3240
aaacaaaaac aggaaaaaaa caaaaaacca aagtggtaag gattcagttc ctgcctataa
3300
tggtctcaga gagggtccta cttttaggtt ttccaggac aggacagtcc ccatttatac
3360
ttattatccc agtttaatta ttcacagcac cccattttac tcagaagtgt tctggtctgg
3420
aggataaata agaggtcacc ctctccaga cccaaagata gatttgtgcc tgtgttggtg
3480
ggggtcgtgt gtgattcaga tggacattgg atggcttcaa aggaatatac cactagagct
3540

ttgtgaggggt agtgatgggtg gctttgccta ttgttttggtt tcccttaaata ctaaacgcag
360
tgcttggcac atagtagcct ccagtaaata cttgtttaat gaacaaacaa acctgtgaag
420
tgagtgatag agtgcttagt ccccttcagt ttccaggatg gagagatgga gaataaggac
480
ctcacacaaa atcacacagt acttggtgga agaagctgag ctatgacctg ccttccttca
540
gaggaatgca ctttgctttg gaagatatga agaaattccc agtacattgt ctttcctatt
600
gggtctgtgt gagaacaggc tgatagatgc ctctgtgtca agctgagctc ccagactctg
660
atacaggctg gggatgatga gaagaaccag aggacgatca ctgtcaaccc tgcccacatg
720
gggaaagcat tcaaggttat gaatgaactg cggagtaaac agctgttggtg tgacgtgatg
780
attgtggcag aagatgtcga gatagaagcc caccgtgtgg tcctggcagc ctgcagcccc
840
tacttctgtg cgatgttcac aggtgacatg tctgagagta aagccaaaaa gatagaaatc
900
aaggacgtgg atgggcagac gctgagtaag ctgattgact acatctatac tgctgaaatc
960
gaggtgactg aagagaatgt ccaggtgctg ctcccggcag ccagettgct gcagctcatg
1020
gatgttcggc agaactgctg tgacttctctg cagtctcagt tgcatccac caattgcctg
1080
ggcatccgtg cgtttgcaga tgtacacacc tgcactgacc ttctgcagca ggccaatgcc
1140
tacgcagagc agcactttcc agaggtgatg ctaggagaag aatttcttag cctgagctctg
1200
gaccaggtgt gcagcttgat atccagcgac aagctgaccg tttcttcaga agagaaggtg
1260
tttgaagctg tgatctcatg gatcaattat gagaaagaaa cccgtttaga gcacatggca
1320
aagctgatgg aacatgtccg acttcctctc ttacctaggg actacctagt ccaaacgggt
1380
gaagaagaag ctttgataaa gaataacaac acctgtaaag acttcctcat tgaggccatg
1440
aaataccatc tcttccctct ggatcagaga ctattgatta agaaccacag gaccaagccc
1500
aggactccag tcagccttcc caaggtcatg attgtggttg gcggccaggc acccaaggca
1560
atccgcagtg tggagtgcta tgatttcgag gaggaccggt gggatcagat tgctgagctt
1620
ccttcagaa gatgcagagc aggtgtggtg ttcatggctg gccacgtgta tgccgtggga
1680
gggtttaatg gctcactgcg ggtgcggaca gtggatgtgt atgacggcgt gaaggaccag
1740
tggacgtcca ttgccagcat gcaggagcgc cggagcacac tgggcgcagc ggtgctcaat
1800
gacttgctct acgcagtggg aggccttgat ggcagtactg gcctagcatc ggtggaagcc
1860
tacagctaca agaccaacga gtggttcttt gtggccccga tgaacacgcg gcggagcagt
1920

cttgagagaa acaaaagcca tcaaaaaggc tattacctgg agagtctgag tttcccgcta
 720
 ccgaaacatt acctggattt tagctcccag acagacatct cggaagc
 768

<210> 5706
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 5706
 Xaa Glu Pro Leu Ser Pro Arg Cys Gly Arg Glu Leu His Gly Gly Ala
 1 5 10 15
 Arg Ala Arg Leu Gly Lys Met Pro Arg Pro Glu Leu Pro Leu Pro Glu
 20 25 30
 Gly Trp Glu Glu Ala Arg Asp Phe Asp Gly Lys Val Tyr Tyr Ile Asp
 35 40 45
 His Thr Asn Arg Thr Thr Ser Trp Ile Asp Pro Arg Asp Arg Tyr Thr
 50 55 60
 Lys Pro Leu Thr Phe Ala Asp Cys Ile Ser Asp Glu Leu Pro Leu Gly
 65 70 75 80
 Trp Glu Glu Ala Tyr Asp Pro Gln Val Gly Asp Tyr Phe Ile Asp His
 85 90 95
 Asn Thr Lys Thr Thr Gln Ile Glu Asp Pro Arg Val Gln Trp Arg Arg
 100 105 110
 Glu Gln Glu His Met Leu Lys Asp Tyr Leu Val Val Ala Gln Glu Ala
 115 120 125
 Leu Ser Ala Gln Lys Glu Ile Tyr Gln Val Lys Gln Gln Arg Leu Glu
 130 135 140
 Leu Ala Gln Gln Glu Tyr Gln Gln Leu His Ala Val Trp Glu His Lys
 145 150 155 160
 Leu Gly Ser Gln Val Ser Leu Val Ser Gly Ser Ser Ser Ser Ser Lys
 165 170 175
 Tyr Asp Pro Glu Ile Leu Lys Ala Glu Ile Ala Thr Ala Val Gln Arg
 180 185 190
 Ala Trp Leu Ser Asp Pro Glu Glu Asn Arg
 195 200

<210> 5707
 <211> 6988
 <212> DNA
 <213> Homo sapiens

<400> 5707
 nnctcttggtg ctctcctcta gttttactga actgccagta ctttgaacac actttgtgct
 60
 tttctcctc caggtctttg tgcatactgt ttctctgcc tgggaatactc ttctttctct
 120
 ttacctgact cgtttctgct ctacttcaa gtctcagatt ctaggaagct ttccatcaac
 180
 ctgctatcac tgggacgagt tggccatccc ctgtgcttct gtagctccta tgaaatcata
 240
 atagttgaaa tgtgatgttt aaatgtttac ttggcattct cctctactga actctaagct
 300

```
<210> 5705
<211> 768
<212> DNA
<213> Homo sapiens
```

```

<400> 5705
ntggagccgc tgagcccccg ctgcggcccg gagctgcatg ggggagcgcg gccaggctc
60
gggaagatgc cccggccgga gttgccctg ccggagggct gggaggaggc gcgcgacttc
120
gacggcaagg tctactacat agaccacacg aaccgcacca ccagctggat cgaccocggg
180
gacaggtaca ccaaaccact cacctttgct gactgcatta gcgacgagtt gccgctggga
240
tggaagagg catatgaccc acaggttggg gattacttca tagaccacaa taccaaaacc
300
actcagattg aggatccaag ggtgcaatgg cggcggggagc aggaacatat gctgaaggat
360
tacctggtgg tggcccagga ggctctgagt gcacaaaagg agatctacca ggtgaagcag
420
cagcgcttgg agcttgca caaggagtag cagcaactgc atgccgtctg ggagcataag
480
ctgggctccc aggtcagctt ggtctctggt tcatcatcca gctccaagta tgacctgag
540
atcctgaaag ctgaaattgc cactgcagtt caaagagcgt ggctttcaga ccctgaagaa
600
aatcgataag aaaatgtctg atgctcaggg cagctacaaa ctggatgaag ctcaggctgt
660

```

gtggccgcgg tggccgtgtt caccacccac atcctgctcc tgctgcccgt gtcctcagc
 420
 atcttgggca tcgtgtgcct ggtggtgacc atcatgtact ggagcggtg ggagatgggg
 480
 gctgtggaag ccattctcct gtccatcctc gttggctcct ccgtggatta ctgcgtccac
 540
 ctggtcgagg gctacctgct ggctggagag aacctgcccc cccaccaggc cgaggacgcc
 600
 cgaacgcagc gccagtggcg tacgctggag gccgtgcggc acgtgggctg ggccatcgtc
 660
 tccagtggcc tcaccacggt catcgccaca gtgcccctct tcttctgcat catcgcccca
 720
 tttgccaagt tcggcaagat tgtggcactc aacacgggag tgtccatcct ctacacgtg
 780
 accgtcagca ccgccctgct gggcatcatg gcgcccagct ctttactcg gaccggagt
 840
 tccttctca aggccctggg tgccgtgctg ctggcagggg ccctggggct gggcgctgc
 900
 ctgctgctcc tgcagagcgg ctataagatt cccctgcccg caggggcctc cctatagccc
 960
 gggacgggct ctggacactt gcacctttgg tcccatgggt gggggacagg agctgcttc
 1020
 cagctcgact tcagctagct gtgtccccag gcttggggcc agggcgccct gcggggccagc
 1080
 gtggaggctg acaccacac agatgggtg gaccatgctg ccttgtggag ctgggagttg
 1140
 gagacagccg ccaccccaca ggccgggcta ctggcagcca cactcggtt tttgccagt
 1200
 ggcagaagag accagccctc ctcccatgcc cggtcacat gggggtcagg ttatttttgt
 1260
 aggggggtct cctctcacac tgcctcagtg ctacaaacct tccagtgtgg atgttacagg
 1320
 gtggccccca ttctaccgat gtgaaaactg aggcgccagg acacagtggc tgccctgtcg
 1380
 ctggatcagt agcagagcca gagctgcctc cgagcgccat gccgccctcg ggaatcatac
 1440
 aggaagagca cagtggatcc aggggtgggg cctctcacc cctaaccctg ccccc
 1496

<210> 5704

<211> 269

<212> PRT

<213> Homo sapiens

<400> 5704

Ser	Arg	Thr	Thr	Tyr	Lys	Gly	Lys	Ser	Ser	Phe	Gln	Thr	Tyr	Ser	Asp
1				5				10					15		
Tyr	Leu	Arg	Trp	Glu	Ser	Phe	Leu	Gln	Gln	Leu	Gln	Ala	Leu	Pro	
			20					25				30			
Glu	Gly	Ser	Val	Leu	Arg	Arg	Gly	Phe	Gln	Thr	Cys	Glu	His	Trp	Lys
			35				40					45			
Gln	Ile	Phe	Met	Glu	Ile	Val	Gly	Val	Gln	Ser	Ala	Leu	Cys	Gly	Leu
	50					55					60				
Val	Leu	Ser	Leu	Leu	Ile	Cys	Val	Ala	Ala	Val	Ala	Val	Phe	Thr	Thr

```

65          70          75          80
Ile Thr Phe Tyr Ile Leu Val Phe Val Val Ala Leu Val Gly Ile Ala
      85          90          95
Arg Ala Val Val Ser Met Thr Val Ser Thr Ser Asn Ala Ala Thr Val
      100          105          110
Ala Asp Lys Ile Leu Trp Glu Ile Thr Arg Phe Phe Leu Leu Ala Ile
      115          120          125
Glu Leu Ser Val Ile Ile Leu Gly Leu Ala Phe Gly His Leu Glu Ser
      130          135          140
Lys Ser Ser Ile Lys Arg Val Leu Ala Ile Thr Thr Val Leu Ser Leu
      145          150          155          160
Ala Tyr Ser Val Thr Gln Gly Thr Leu Glu Ile Leu Tyr Pro Asp Ala
      165          170          175
His Leu Ser Ala Glu Asp Phe Asn Ile Tyr Gly His Gly Gly Arg Gln
      180          185          190
Phe Trp Leu Val Ser Ser Cys Phe Phe Phe Leu Val Tyr Ser Leu Val
      195          200          205
Val Ile Leu Pro Lys Thr Pro Leu Lys Glu Arg Ile Ser Leu Pro Ser
      210          215          220
Arg Arg Ser Phe Tyr Val Tyr Ala Gly Ile Leu Ala Leu Leu Asn Leu
      225          230          235          240
Leu Gln Gly Leu Gly Ser Val Leu Leu Cys Phe Asp Ile Ile Glu Gly
      245          250          255
Leu Cys Cys Val Asp Ala Thr Thr Phe Leu Tyr Phe Ser Phe Phe Ala
      260          265          270
Pro Leu Ile Tyr Val Ala Phe Leu Arg Gly Phe Phe Gly Ser Glu Pro
      275          280          285
Lys Ile Leu Phe Xaa Leu Gln Met Pro Ser Gly Arg Asp Arg Gly Ala
      290          295          300
Arg Cys Thr Pro Thr Pro Ala Leu Arg Cys Gly Pro Ala Gly Gly Pro
      305          310          315          320
Gly Gly Cys Arg Gly Cys Trp Gly Leu Ser Cys Gln Leu Leu Glu His
      325          330          335
Ala Val Arg Leu Cys Arg Arg Gly Gly Leu Pro Gly
      340          345

```

<210> 5703

<211> 1496

<212> DNA

<213> Homo sapiens

<400> 5703

```

nggctcacca caccgcaagg tgcccgcttc caagctgacc ccaccagcac tcagacacgc

```

60

```

atgcacacac acacgcagac ctactatgaa ctggcctgtg ctcagcaaga gcagaattga

```

120

```

tgagcagata ccttaagaat cttttagagc aggaccacgt acaagggcaa atcctccttc

```

180

```

cagacctact cggactacct ggcgtgggag agcttcctcc agcagcagct gcaggccttg

```

240

```

cccgagggct cagtctgcg ccggggcttc cagacctgcg agcactggaa gcagatatcc

```

300

```

atggaaatcg taggggtgca gagcgccctg tgcggcctgg tgctatccct gctcatctgc

```

360

gtcacccagg ggaccctgga gacccgtgac cctgatgcc atctctcagc tgaggacttt
 840
 aatatctatg gccatggggg ccgccagttc tggctgggtca gctcctgctt cttcttctctg
 900
 gtctactctc tgggtgggtcat ccttcccaag accccgctga aggagcgcat ctccctgcct
 960
 tctcggagga gcttctacgt gtatgcgggc atcctggcac tgctcaacct actgcagggg
 1020
 ctggggagtg tgctgctgtg cttcgacatc atcgaggggc tctgctgtgt agatgccaca
 1080
 accttcctgt acttcagctt cttcgctccg ctcactctacg tggctttcct ccggggcttc
 1140
 ttcggctcgg agcccaagat cctcttcntc ctacaaatgc caagtggacg agacagagga
 1200
 gccagatgta cacctacccc agccctacgc tgtggcccgg cgggagggcc tggaggctgc
 1260
 aggggctgct ggggcctcag ctgccagcta ctcgagcacg cagttcgact ctgccggcgg
 1320
 ggtggcctac ctggatgaca tcgcttccat gccctgccac actggcagca tcaacagcac
 1380
 agacagcgag cgctggaagg ccatcaatgc ctgagggcag ctgccagggc ctgtggagga
 1440
 caggccagag aggaggccag caggcccaga gtccccaggg gaggaggacc aggtcaaggg
 1500
 acgttctgtg ggcagtagcc ctgtgtggcc ctgttccac catgagtctg gaggccccac
 1560
 ctccctgggg ctcccaatcc cctttgccat ctctgctctc actggggacc ctctccct
 1620
 tccacctgc tctcactctg ctcagtgaca tggcccaggc tttccttcca gggccatgct
 1680
 tggcaagggt ggctgagggc accctccttc tctgcacct tggcacgagg gcagggctgg
 1740
 ctctcccaat gctccatcc catcccatg gtgctttggc ctctcaaag catccaccat
 1800
 ggtggatgga ctgaagtgtg tatatcttct tgatctattt ttttaataaaa aggaaaagga
 1860
 gcagaaaaaa aaaaaaaaag ttttg
 1885

<210> 5702

<211> 348

<212> PRT

<213> Homo sapiens

<400> 5702

Met	Asp	Thr	Leu	Glu	Val	Thr	Trp	Ala	Asn	Gly	Ser	Thr	Ala	Leu
1				5				10					15	
Pro	Pro	Pro	Leu	Ala	Pro	Asn	Ile	Ser	Val	Pro	His	Arg	Cys	Leu
			20				25					30		Leu
Leu	Leu	Tyr	Glu	Asp	Ile	Gly	Thr	Ser	Arg	Val	Arg	Tyr	Trp	Asp
		35				40					45			Leu
Leu	Leu	Leu	Ile	Pro	Asn	Val	Leu	Phe	Leu	Ile	Phe	Leu	Leu	Trp
		50				55					60			Lys
Leu	Pro	Ser	Ala	Arg	Ala	Lys	Ile	Arg	Ile	Thr	Ser	Ser	Pro	Ile
														Phe

```

      35          40          45
Gly Pro Ile Ser Asp Ala Lys Glu Asn Pro Tyr Gly Glu Asp Asp Asn
  50          55          60
Lys Ser Pro Phe Pro Leu Gln Pro Lys Asn Lys Arg Ser Tyr Ala Gln
  65          70          75          80
Asn Val Thr Val Trp Ile Lys Pro Ser Gly Leu Gln Thr Asp Val Gln
      85          90          95
Lys Ile Leu Arg Asn Ala Arg Lys Leu Pro Glu Lys Thr Gln Thr Phe
      100          105          110
Tyr Lys Glu Leu Asn Arg Leu Arg Lys Ala Ala Leu Ala Phe Gly Phe
      115          120          125
Leu Asp Leu Leu Lys Gly Val Ala Asp Met Leu Glu Arg Glu Cys Thr
      130          135          140
Leu Leu Pro Glu Thr Ala His Pro Asp Ala Ala Phe Gln Leu Thr His
      145          150          155          160
Ala Ala Gln Gln Leu Lys Leu Ala Ser Thr Gly Thr Ser Glu Tyr Ala
      165          170          175
Ala Tyr Asp Gln Asn Ile Thr Pro Leu His Thr Asp Phe Ser Gly Ser
      180          185          190
Ser Thr Glu Arg Ile
      195

```

<210> 5701

<211> 1885

<212> DNA

<213> Homo sapiens

<400> 5701

```

gccttgacaca tggagatgct tagctgaggg ggtggctttg ttagactatt tgcaggctgt
  60
gagatagagc ctgagatggg ggactgggcc cctgcctggg ggattgggtc gtgacctgtg
  120
tgagagcccca cactgagctg cagtgggtgg ggaggggtgt ttacaggggt gctctgtgca
  180
gcccctctga ttttccctg ggagtccag gtccagggga aggaggacag tggcccaggc
  240
cacacagctc actgggcggc tctcactccc ccagggtgtg ctgctggcgg gatggacacc
  300
ctggaggagg tgacttgggc caatgggagc acagcgctac cccaccccct ggcaccaaac
  360
atcagtgtgc ctcatcgctg cctgctgtgt ctctacgaag acattggcac ctccagggtc
  420
cggtactggg acctcttgtg gctcatcccc aatgtgtctt tctcatctt cctgctctgg
  480
aagcttccat ctgctcgggc gaagatccgc atcacctcca gcccatttt tatcaccttc
  540
tacatcctgg tgtttgtggt ggcgctgggt ggcattgccc gggccgtggt atccatgacg
  600
gtgagcacct cgaacgctgc aactgttctg gataagatcc tgtgggagat caccgccttc
  660
ttctgtctgg ccacgagct gagtgtgatc atcctgggcc tggccttttg ccacctggag
  720
agtaagtcca gcatcaagcg ggtgctggcc atcaccacag tgctgtccct ggctactct
  780

```


gtcagggtttc ctgaggaagg caggggtgct ctatgctcat cagtcattca agctttctcag
 420
 gaaatgtgcc catcatggga acagcagcta tcttccaagc ttaaaaatta tgaatcccag
 480
 gaagttaaag cccaaccagc caaccacctt cacatccttc tcatactagt agagtcattc
 540
 aaaacagcaa gtggtgcttc tgaggcagcc tcaggaaggc ctttgggtgg ctattctaga
 600
 ggtgaacata ctggaaaggc ttttacctaa agcattttca gttgaaatga aaaaagaagg
 660
 aaagctccaa aagtcagttt caaattcttt cagtgtgct cccagagaag tccgtgtgca
 720
 aaggtgtgat gttctggtca taagcggcat actcagaggc gccggtactg gccagcttga
 780
 gctgctgggc agcatgggtc agctggaatg cagcatcagg gtgggctgtc tcaggcagca
 840
 gtgtgcattc cctttccagc atgtcagcca cccctttcag caggctccagg aaaccaaagg
 900
 ctagagcggc ctttcgcaaa cggttcagct ccttatagaa tgtctgtgtt ttttcaggta
 960
 gtttccttgc atttcttaaa atcttctgta catctgtctg caggccgctg ggtttgatcc
 1020
 agacagtcac attctgggca taactgcgtt tgtttttggg ctgtaggggg aatggactct
 1080
 tattgtcatc ctgcataa gggttttctt tagcatctga aataggaccc aactgtgcca
 1140
 ttttccttag ccatgggaga ggttctgggc caggctcaaa gagagacatc atgaggtttg
 1200
 atttcttctt gctgtcagct tgggagtaga gcattccatg ccattcagga cctaattgaa
 1260
 caatcgctac cattccttcc acttttaggc taccatggag caggacacaa aagttgggta
 1320
 ttttgctgc aatctgattg gctgaattct catcttcatt gtcatcagtg atgccagcac
 1380
 ccacatcatc accttctttg ttaagtgcta tgggcaagac cagatgcctg gacagaactg
 1440
 ggggacttga aatatcagct atatcaataa atcccactat ttccaaatct gtgttaatga
 1500
 ctttagggat aggatcaatt tcttcatcta caacaaaagg ttctggcctg gggaagactt
 1560
 gtacc
 1565

<210> 5700

<211> 197

<212> PRT

<213> Homo sapiens

<400> 5700

Met	Val	Ala	Ile	Val	Gln	Leu	Gly	Pro	Glu	Trp	His	Gly	Met	Leu	Tyr
1				5				10					15		
Ser	Gln	Ala	Asp	Ser	Lys	Lys	Lys	Ser	Asn	Leu	Met	Met	Ser	Leu	Phe
			20					25				30			
Glu	Pro	Gly	Pro	Glu	Pro	Leu	Pro	Trp	Leu	Gly	Lys	Met	Ala	Gln	Leu

130 135 140
 Trp Arg Val Arg Arg Leu Val Arg His Gly Thr Gly Pro Ala Gly Trp
 145 150 155 160
 Gln Leu Val Gly Leu Ala Leu Cys Leu Met Leu Val Gln Val Ile Ile
 165 170 175
 Ala Val Glu Trp Leu Val Leu Thr Val Leu Arg Asp Thr Arg Pro Ala
 180 185 190
 Cys Ala Tyr Glu Pro Met Asp Phe Val Met Ala Leu Ile Tyr Asp Met
 195 200 205
 Val Leu Leu Val Val Thr Leu Gly Leu Ala Leu Phe Thr Leu Cys Gly
 210 215 220
 Lys Phe Lys Arg Trp Lys Leu Asn Gly Ala Phe Leu Leu Ile Thr Ala
 225 230 235 240
 Phe Leu Ser Val Leu Ile Trp Val Ala Trp Met Thr Met Tyr Leu Phe
 245 250 255
 Gly Asn Val Lys Leu Gln Gln Gly Asp Ala Trp Asn Asp Pro Thr Leu
 260 265 270
 Ala Ile Thr Leu Ala Ala Ser Gly Trp Val Phe Val Ile Phe His Ala
 275 280 285
 Ile Pro Glu Ile His Cys Thr Leu Leu Pro Ala Leu Gln Glu Asn Thr
 290 295 300
 Pro Asn Tyr Phe Asp Thr Ser Gln Pro Arg Met Arg Glu Thr Ala Phe
 305 310 315 320
 Glu Glu Asp Val Gln Leu Pro Arg Ala Tyr Met Glu Asn Lys Ala Phe
 325 330 335
 Ser Met Asp Glu His Asn Ala Ala Leu Arg Thr Ala Gly Phe Pro Asn
 340 345 350
 Gly Ser Leu Gly Lys Arg Pro Ser Gly Ser Leu Gly Lys Arg Pro Ser
 355 360 365
 Ala Pro Phe Arg Ser Asn Val Tyr Gln Pro Thr Glu Met Ala Val Val
 370 375 380
 Leu Asn Gly Gly Thr Ile Pro Thr Ala Pro Pro Ser His Thr Gly Arg
 385 390 395 400
 His Leu Trp

<210> 5699

<211> 1565

<212> DNA

<213> Homo sapiens

<400> 5699

 tttttttttt tttttttttt tttttttttt ttttttcata gtgaaaccat tttctagaaa
 60

 atcaaatatt ttattttcat taaaaaaaaa ccttgaataa taggaatcat tttacacatt
 120

 aatggttgct ctttaaaagt tagaatctca agagatacca aaagcactta agagttacca
 180

 ccacattttg cccaagttct aaggaaagtt ctgaaactta gtggtggtgt gtttgactc
 240

 agcaagctcc agacagtctg agttgctcat tccatgaaca gaagcttgaa aatgccctta
 300

 cagttgagat ataaacgagg gaagaggtga agctttcagg aagccagaga gccctgccc
 360

tgcctcacia gacgtgacac ctccgggtcct ttccgttgct atggtgaaaa ttccctggatg
 2580
 gaatggatca catgaggggt tcttggtgct ttggagggt gtgggggata ttttggtttg
 2640
 gtttttctgc aggttccatg aaaacagccc tttccaagc ccattgtttc tgtcatgggt
 2700
 tccatctgtc ctgagcaagt ctttcctttg ttatttagca tttcgaacat ctccggccatt
 2760
 caaagcccc atgttctctg cactgtttgg ccagcataac ctctagcatc gattcaaagc
 2820
 agagttttaa cctgacggca tggaaatgat aaatgagggg gggtccttct gcagatactc
 2880
 taatcactac attgtttttt ctataaaact acccataagc ctttaacctt taaagaaaaa
 2940
 tgaaaaaggt tagtgtttgg gggccggggg aggactgacc gttcataag ccagtacgtc
 3000
 tgagctgagt atgtttcaat aaaccttttg atatttctca aggccttagt ctctgctgtc
 3060
 tccccctccc accccatcct tgcaaagcac tggggaaagt aaggccaatc tggccctccc
 3120
 tgtgtgaccc gccttcgagt tttccttaac agttagtaca tttccttggt ttaccacgca
 3180
 cggggaagaa aacgcatggc ccagaaatgc cccccccacc tgacctcccc ggaagcacc
 3240
 cgcctctgcc cagagcatgt gcttgcttct agagaatccc gttccagtca ttgcgtggac
 3300
 agaaaacgta agagtcctgg ggaggggtgg gagggaaatga agctaggacc tggggtcggg
 3360
 gt
 3362

<210> 5698

<211> 403

<212> PRT

<213> Homo sapiens

<400> 5698

Met	Phe	Val	Ala	Ser	Glu	Arg	Lys	Met	Arg	Ala	His	Gln	Val	Leu	Thr
1				5				10						15	
Phe	Leu	Leu	Leu	Phe	Val	Ile	Thr	Ser	Val	Ala	Ser	Glu	Asn	Ala	Ser
			20					25					30		
Thr	Ser	Arg	Gly	Cys	Gly	Leu	Asp	Leu	Leu	Pro	Gln	Tyr	Val	Ser	Leu
		35					40					45			
Cys	Asp	Leu	Asp	Ala	Ile	Trp	Gly	Ile	Val	Val	Glu	Ala	Val	Ala	Gly
		50				55					60				
Ala	Gly	Ala	Leu	Ile	Thr	Leu	Leu	Leu	Met	Leu	Ile	Leu	Leu	Val	Arg
65					70					75				80	
Leu	Pro	Phe	Ile	Lys	Glu	Lys	Glu	Lys	Lys	Ser	Pro	Val	Gly	Leu	His
				85					90					95	
Phe	Leu	Phe	Leu	Gly	Thr	Leu	Gly	Leu	Phe	Gly	Leu	Thr	Phe	Ala	
			100				105					110			
Phe	Ile	Ile	Gln	Glu	Asp	Glu	Thr	Ile	Cys	Ser	Val	Arg	Arg	Phe	Leu
		115					120					125			
Trp	Gly	Val	Leu	Phe	Ala	Leu	Cys	Phe	Ser	Cys	Leu	Leu	Ser	Gln	Ala

ctggtgctca cctgctgctg tgacacaagg ccagcctgct cctacgagcc catggacttt
900
gtgatggccc tcatctacga catggtactg cttgtggtca ccctggggct ggccctcttc
960
actctgtgctg gcaagttaa gaggtggaag ctgaacgggg ccttctctct catcacagcc
1020
ttcctctctg tgctcatctg ggtggcctgg atgaccatgt acctcttcgg caatgtcaag
1080
ctgcagcagg gggatgcctg gaacgacccc accttggcca tcacgctggc ggccagcggc
1140
tgggtctctg tcatcttcca cgccatccct gagatccact gcaccttct gccagccctg
1200
caggagaaca cgcccaacta cttcgacacg tcgcagccca ggatgcggga gacggccttc
1260
gaggaggacg tgcagctgcc gcgggcctat atggagaaca aggccttctc catggatgaa
1320
cacaatgcag ctctccgaac agcaggattt cccaacggca gcttgggaaa aagaccagt
1380
ggcagcttgg ggaaaagacc cagcgtccg tttagaagca acgtgtatca gccaaactgag
1440
atggccgtcg tgctcaacgg tgggaccatc ccaactgctc cgccaagtca cacaggaaga
1500
cacctttggt gaaagacttt aagtccaga gaatcagaat ttctcttacc gatttgcctc
1560
cctggctgtg tctttcttga gggagaaatc ggtaacagtt gccgaaccag gccgcctcac
1620
agccaggaaa tttggaatc ctagccaagg ggatttctg taaatgtgaa cactgacgaa
1680aacaccgact gccgcccct cccctgccac acacacagac acgtaatacc 1740
agaccaacct caatccccgc aaactaaagc aaagctaatt gcaaatagta ttaggtcac
1800
tggaaaatgt ggctgggaag actgtttcat cctctggggg tagaacagaa ccaaattcac
1860
agctgggtgg ccagactggt gttggttga ggtggggggc tccactctt atcacctctc
1920
cccagcaagt gctggacccc aggtagcctc ttggagatga ccgttgcgtt gaggacaaat
1980
ggggactttg ccaccggctt gcctggtggt ttgcacattt caggggggtc aggagagtta
2040
aggaggttgt ggggtgggatt ccaaggtgag gcccaactga atcgtggggg gagctttata
2100
gccagtagag gtggagggac cctggcatgt gccaaagaag aggcctctg ggtgatgaag
2160
tgaccatcac atttggaaag tgatcaacca ctgttcctc tatggggctc ttgctctagt
2220
gtctatggtg agaacacagg ccccgcccct tccctttag agccatagaa atattctggc
2280
ttggggcagc agtccttct tcccttgatc atctcgccct gttcctacac ttacgggtgt
2340
atctccaaat cctctcccaa ttttattccc ttattcattt caagagctcc aatggggctc
2400
ccagctgaaa gcccctccgg gaggcaggtt ggaaggcagg caccacggca ggttttccgc
2460
gatgatgtca cctagcaggg cttcaggggt tccactagg atgcagagat gacctctgc
2520

210		215		220
Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro Ala Val Pro Asp Ile				
225		230		235
Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly Arg Asn Ala Thr Val				
	245		250	255
Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg Ala Ser Leu Ser Val Gln				
	260		265	270
Asp Arg Tyr Ser Pro Pro Asn Ala Asp Gly His Lys Ala Val Phe Val				
	275		280	285
Ala Arg Val Leu Thr Gly Asp Tyr Gly Gln Gly Arg Arg Gly Leu Arg				
	290		295	300
Ala Pro Pro Leu Arg Gly Pro Gly His Val Leu Leu Arg Tyr Asp Ser				
305		310		315
Ala Val Asp Cys Ile Cys Gln Pro Ser Ile Phe Val Ile Phe His Asp				
	325		330	335
Thr Gln Ala Leu Pro Thr His Leu Ile Thr Cys Glu His Val Pro Arg				
	340		345	350
Ala Ser Pro Asp Asp Pro Ser Gly Leu Pro Gly Arg Ser Pro Asp Thr				
	355		360	365

<210> 5697

<211> 3362

<212> DNA

<213> Homo sapiens

<400> 5697

gtatccaatt caaagaatac aaaaggggtat acagagaagt tggcctccct cctaccctgt
 60
 ccttcagcca ccagtgatga tgattcacgg ttcttcactg caccagcca agggtagaga
 120
 tgggtcccaa aacctccgtg cctgaggaaa ggagcacgtt ttcctatgtg tgcaaagggt
 180
 ccatgtgcgc ttgcagggtt gaaatgaggg gagtcttctt caagaagtca ggagaggggg
 240
 agtcttccaa tgaattcatc tttccttccc cccaaccatt cccctcttgg cttttctaga
 300
 atgttcgtgg catcagagag aaagatgaga gctcaccagg tgctcacctt cctcctgctc
 360
 ttcgtgatca cctcggtggc ctctgaaaac gccagcacat cccgaggctg tgggctggac
 420
 ctctccctc agtacgtgtc cctgtgcgac ctggacgcca tctggggcat tgtggtggag
 480
 gcggtggcgc gggcgggcgc cctgatcaca ctgctcctga tgctcatcct cctggtgagg
 540
 ctgcccttca tcaaggagaa ggagaagaag agcctgtgtg gcctccactt tctgttctc
 600
 ctggggaccc tgggcctctt tgggctgacg ttgccttca tcatccagga ggacgagacc
 660
 atctgctctg ttgcgcgctt cctctggggc gtctctttg cgctctgctt ctctgctg
 720
 ctgagccagg catggcgcgt gcggaggctg gtgcggcatg gcacggggcc cgcgggctgg
 780
 cagctggtgg gcctggcgct gtgcctgatg ctggtgcaag tcatcatcgc tgtggagtgg
 840

gatggccata aggcgggtgtt cgtgggcacgg gtgctgactg gcgactacgg gcagggccgc
 900
 cgcggtctgc gggcgcccc tctgcggggt cctggccacg tgctcctgcg ctacgacagc
 960
 gccgtggact gcatttgcca gcccagcatc ttctgtcatct tccacgacac ccaggcgctg
 1020
 cccacccacc tcattcacctg cgagcacgtg ccccgcgctt ccccgacga cccctctggg
 1080
 ctccccgggc gctccccaga cacttaaccg aagggggccac cctctggcct cctgcttccc
 1140
 aggtctccag ctccgcacag gctgatgtc cccgccccca actgtggccg cctgagctgt
 1200
 ccccggggac gcccctgcat ccctctgcgg gctccagaag gcgggtgtggg ggatggcggt
 1260
 cagcagcggc cgaggggggc cgggctaggt cccagcctgg gccgaccca ccaccagggg
 1320
 tcagcagagc ccaggagcga caccgcccgc ccgcccgtcc cagacctcgc ccgagtcggc
 1380
 tctgttgttt gaataaacgt gaacgtgaac ccagaaa
 1417

<210> 5696

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5696

Val	Ala	Leu	His	Arg	Ser	Leu	Lys	Pro	Gln	Gly	Gln	Val	Gly	Glu	Gln
1			5					10						15	
Glu	Glu	Ala	Gly	Ala	Leu	Arg	Gln	Ala	Leu	Thr	Phe	Ser	Leu	Leu	Glu
		20					25					30			
Gln	Pro	Pro	Leu	Glu	Ala	Glu	Glu	Pro	Pro	Asp	Arg	Gly	Thr	Asp	Gly
		35				40					45				
Lys	Ala	Gln	Leu	Val	Val	His	Ser	Ala	Phe	Glu	Gln	Asp	Val	Glu	Glu
	50				55					60					
Leu	Asp	Arg	Ala	Leu	Arg	Ala	Ala	Leu	Glu	Val	His	Val	Gln	Glu	Glu
65				70					75					80	
Thr	Val	Gly	Pro	Trp	Arg	Arg	Thr	Leu	Pro	Ala	Glu	Leu	Arg	Ala	Arg
			85				90						95		
Leu	Glu	Arg	Cys	His	Gly	Val	Ser	Val	Ala	Leu	Arg	Gly	Asp	Cys	Thr
		100					105					110			
Ile	Leu	Arg	Gly	Phe	Gly	Ala	His	Pro	Ala	Arg	Ala	Ala	Arg	His	Leu
	115					120						125			
Val	Ala	Leu	Leu	Ala	Gly	Pro	Trp	Asp	Gln	Ser	Leu	Ala	Phe	Pro	Leu
	130				135					140					
Ala	Ala	Ser	Gly	Pro	Thr	Leu	Ala	Gly	Gln	Thr	Leu	Lys	Gly	Pro	Trp
145				150					155					160	
Asn	Asn	Leu	Glu	Arg	Leu	Ala	Glu	Asn	Thr	Gly	Glu	Phe	Gln	Glu	Val
		165					170						175		
Val	Arg	Ala	Phe	Tyr	Asp	Thr	Leu	Asp	Ala	Ala	Arg	Ser	Ser	Ile	Arg
		180					185					190			
Val	Val	Arg	Val	Glu	Arg	Val	Ser	His	Pro	Leu	Leu	Gln	Gln	Gln	Tyr
	195					200						205			
Glu	Leu	Tyr	Arg	Glu	Arg	Leu	Leu	Gln	Arg	Cys	Glu	Arg	Arg	Pro	Val

tttgaggagt tctgcacgc catcgagaag aggggcgttg gcgccatgga gatcgtggcc
 360
 atggacatga aggtcagcgg gcatgtaca
 389

<210> 5694
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 5694
 Arg Gln Leu Pro Pro Thr Gly Ala Ser Glu Pro Arg Asn Met Ile Tyr
 1 5 10 15
 Met Ser Arg Leu Gly Ile Trp Gly Glu Gly Thr Pro Phe Arg Asn Phe
 20 25 30
 Glu Glu Phe Leu His Ala Ile Glu Lys Arg Gly Val Gly Ala Met Glu
 35 40 45
 Ile Val Ala Met Asp Met Lys Val Ser Gly His Val
 50 55 60

<210> 5695
 <211> 1417
 <212> DNA
 <213> Homo sapiens

<400> 5695
 gtggccctcc accggtcatt gaagcctcaa ggtcagggtg gtgagcagga ggaggctggt
 60
 gccttgccggc aagccctaac cttttccctg ttggagcagc ccccggttga ggcagaagag
 120
 cccccagata gggggactga tggcaaggcc cagctggtgg tgcactcggc ctttgagcag
 180
 gatgtggagg agctggaccg ggcgctcagg gctgccttgg aggtccacgt ccaggaggag
 240
 acggtggggc cctggcgccg cacactgcct gcagagctgc gtgctcgcct ggagcggtgc
 300
 catggtgtga gtgttgcct gcgtggtgac tgcaccatcc tccgtggctt cggggcccac
 360
 cctgcccgtg ctgcccgcca cttggtggca cttctggctg gccctggga tcagagtttg
 420
 gcctttccct tggcagcttc aggcctacc ttggcggggc agacgctgaa ggggccctgg
 480
 aacaacctgg agcgtctggc agagaacacc ggggagttcc aggaggtggt gcgggccttc
 540
 tacgacaccc tggacgctgc ccgcagcagc atccgcgtcg ttcgtgtgga gcgcgtgtcg
 600
 caccgcgtgc tgcagcagca gtatgagctg taccgggagc gcctgctgca gcgatgcgag
 660
 cggcgcccgg tggagcaggt gctgtaccac ggcacgacgg caccggcagt gcctgacatc
 720
 tgcgcccacg gcttcaaccg cagcttctgc ggccgcaacg ccacggtcta cgggaagggc
 780
 gtgtatttcg ccaggcgcg ctcctgtcgt gtgcaggacc gctactcgcc ccccaacgcc
 840

agtgccgggc cctcattcag cagatgtccc cctctgcctt tggcttgaat gactgggatg
 780
 atgatgagat cctagcttcg gtgctggcag tgteccaaca ggaataccta gacagtatga
 840
 agaaaaacaa agtgcacaga gacccgcccc cagacaagag ttgatggaga cccagggatt
 900
 ggacaccatc tcccaacccc agggattcgg gcaaggggtgc cgaagataga caagaggcac
 960
 acagagacag accaactggc agccaggcag ccccagagga gagagacatt cagacagagg
 1020
 aaagtctccc tgccctcat tccttccaag atgagaaaaa cttgccgcca cccccgaca
 1080
 ctgatgccag ggaggtggga ggaagaagtg ggaaatttcc cttcccagta cccccaagaa
 1140
 cgtctgagcc ttcaatgttg aatTTTTTct ttattaaaat tacttttatc ttataaaatc
 1200
 aactaatcaa aatgaaaaa aaaaaaa
 1227

<210> 5692

<211> 86

<212> PRT

<213> Homo sapiens

<400> 5692

Lys Arg Lys Asn Asn Cys His Gly Asn His Ile Glu Met Gln Ala Met
 1 5 10 15
 Ala Glu Met Tyr Asn Arg Pro Val Glu Val Tyr Gln Tyr Ser Thr Glu
 20 25 30
 Pro Ile Asn Thr Phe His Gly Ile His Gln Asn Glu Asp Glu Pro Ile
 35 40 45
 Arg Val Ser Tyr His Arg Asn Ile His Tyr Asn Ser Val Val Asn Pro
 50 55 60
 Asn Lys Ala Thr Ile Gly Val Gly Leu Gly Cys His His Ser Asn Gln
 65 70 75 80
 Gly Leu Gln Ser Ser Leu
 85

<210> 5693

<211> 389

<212> DNA

<213> Homo sapiens

<400> 5693

nacgcgtgtg ggatacccct tcgcggggac agccaggcag aaagacgctg ctcctcctcg
 60
 gacactgggg cacctctgcg cctgtcccaa ggccacgctg gctctcttca ggcccatggc
 120
 tccaaccccc cagggccct cgtcggggcg tccaactta gtctgccct gacgcggcct
 180
 ctgggccctc ccgggttggg gagctgacgg cagcttcccc ccacaggtgc ctctgagcct
 240
 cggaacatga tctacatgag ccgcttgggt atctggggcg agggcacacc cttccggaac
 300

gcttcagggtg ctgtcgggggt aaaagtaact gtttttcccc ttctcttaaa accacagagg
 1740
 acctgtgaca gctctgcaga aatgccagtg cctggccccc tcttgccctt tatggctgag
 1800
 gaaagttacc caacaaagga ttttattcca catttgtgtg ccgggtcatt gtgaaataat
 1860
 gtttatgcag ccaacatctg aaaaaaaaaa aaaaaaa
 1897

<210> 5690

<211> 54

<212> PRT

<213> Homo sapiens

<400> 5690

Thr	Ile	Arg	Ile	Ile	Glu	Glu	Cys	Glu	His	Trp	Ser	Phe	Val	Phe	Gln
1			5					10					15		
Val	Gly	Gln	Cys	Val	Val	Val	Phe	Ser	Gln	Ala	Pro	Ser	Gly	Arg	Ala
		20					25					30			
Pro	Leu	Ser	Pro	Ser	Leu	Asn	Ser	Arg	Pro	Ser	Pro	Ile	Ser	Ala	Thr
	35					40						45			
Xaa	Ser	Ser	Ser	Arg	Ser										
	50														

<210> 5691

<211> 1227

<212> DNA

<213> Homo sapiens

<400> 5691

aagcggaaaa acaattgcc a tggcaaccac attgagatgc aggccatggc agagatgtac
 60
 aaccgtcctg tggagggtga ccagtacagc acagaaccca tcaacacatt ccatgggata
 120
 catcaaaacg aggacgaacc cattcgtgtt agctaccatc ggaatatcca ctataattca
 180
 gtggtgaatc ctaacaaggc caccattggt gtggggctgg gctgccatca ttcaaaccag
 240
 ggtttgcaga gcagtctctg atgaagaatg ccataaaaac atcggaggag tcatggattg
 300
 aacagcagat gctagaagac aagaaacggg ccacagactg ggaggccaca aatgaagcca
 360
 tcgaggagca ggtggctcgg gaatcctacc tgcagtgggt gcgggatcag gagaaacagg
 420
 ctgcgcaggt ccgaggcccc agccagcccc ggaaagccag cgccacatgc agttcggcca
 480
 cagcagcagc ctccagtggc ctggaggagt ggactagccg gtccccgcgg cagcggagtt
 540
 cagcctcgtc acctgagcac cctgagctgc atgctgaatt gggcatgaag ccccttcccc
 600
 caggcaactgt tttagctctt gccaaacctc cttcgccctg tgcgccaggt acaagcagtc
 660
 agttctcggc agggggccgac cgggcaactt ccccccttgt gtccctctac cctgctttgg
 720

tgaacaatca gaatcataga agagtgtgag cactggctct ttgtcttcca ggtgggacag
120
tgtgtggtgg tcttcagcca ggctcctagt gggagagccc cactcagccc cagtttgaac
180
tctcgcccat cacctatcag tgccactncc tccagctctc gttcctgaaa cccgagagta
240
ccgctctcag tctccagtaa gaagcatgga tgaagctcct tgtgttaacg gccgctgggg
300
aacactgaga cccagggctc aaaggcagac tcctcaggtt cccgggaagg gagcctttcc
360
ccagccagag gagacggctc tcctatcctc aatgggtggga gtttgtctcc aggaacggca
420
gctgtgggtg gctcttcttt ggacagtcct gtacaggcca tatctccaag tactccatct
480
gctgctgaag gatacgacct gaaaatagga ctttctttgg ccccccgcg aggatcaacc
540
agatcagaaa gatctgagat taggatccat agatctgaat tgggatctaa acccgcttcc
600
agtagtaatc ccatggatgg catggacaat aggacagttg ggggaagtat gagacacct
660
cctgaacaga caaatggtgt gcatacccca cctcacgtgg ccagtgcctt tgcagggggc
720
gtctccccag gtgccctgcg tcggagtctg gaagccatca aagcgatgtc ctccaaaggc
780
ccctgggect ctgcagcact aagtcctcct cttgggtctt ctccaggctc tcctgggagc
840
cagagtttga gcagtggaga aacagtgtcc atccctcgcc cagggcctgc ccaaggagat
900
ggacattcct tacctcccat tgctcgccgc ctgggccacc accctccaca gtccctaaat
960
gttggcaaac cctatacca gagtatgaac tgcaagccca tgcagatgta cgtgctggac
1020
attaaagaca ccaaggagaa ggggcgggtc aaatggaaag tatttaatag cagttctgtg
1080
gttggacctc ctgaaaccag cctgcatacc gtggtacaag gcaggggtga actcatcata
1140
tttggaggac tcatggacaa gaaacagaat gtgaagtact atccaaaaac aaacgccttg
1200
tactttgtac gagcaaagag ataatgtgtt ctaaaccctt ttccttttct gtggctttta
1260
atttgggaatt ttccagtgtg taagcatttg gactgagaat tgggaaaaca aaattactcc
1320
cagaagccaa aactctttaa ttcccaaccg aagtcactcc aggctgggat caaatctcca
1380
ttaagaaaaa aaattatata taaatatata tatatatatt atatagccaa ctctgttgac
1440
aaaaaaaggg agagatttcc atcctgggtc agataaagt gttgctgtgt tttaacaggg
1500
gctgggctgc ctttttctac cttgctggta actagaccaa gaagttagag aatagactaa
1560
catcagtaac ttcccaaaag aaactgaaga gcccctgta aatctttatg tggccttctt
1620
ggagttaaaa aatgaaaggg catatgtaag ttgcaaagggt ggagggtttt agactctcat
1680

35 40 45
 Ile Glu Glu Arg Leu Leu Met Tyr Ser Phe Val Asn Asp Lys Tyr Val
 50 55 60
 Pro Ser Gln Arg Pro
 65

<210> 5687
 <211> 328
 <212> DNA
 <213> Homo sapiens

<400> 5687
 actctctccc gaccgcgtgg tgcgggtaag ggtggtggtg atggtggtgg tggtagagcg
 60
 ccccggtctt gcatgcacgc ctgcgtgaac accccgggct cttcccggtt cacctgcccc
 120
 ggtggatccg aaactctggc tgacgggaag agctgtgaga atgtggatga atgtgtgggc
 180
 ctgcagccgg tgtgccccca ggggaccaca tgcataca cgggtggaag cttccagtgt
 240
 gtcagccctg agtgccccga gggcagcggc aatgtgagct acgtgaagac gtctccattc
 300
 cagtgtgagc ggaaccctg ccccatgg
 328

<210> 5688
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 5688
 Thr Leu Ser Arg Pro Arg Gly Ala Gly Lys Gly Gly Gly Asp Gly Gly
 1 5 10 15
 Gly Gly Glu Arg Pro Arg Leu Cys Met His Ala Cys Val Asn Thr Pro
 20 25 30
 Gly Ser Ser Arg Cys Thr Cys Pro Gly Gly Ser Glu Thr Leu Ala Asp
 35 40 45
 Gly Lys Ser Cys Glu Asn Val Asp Glu Cys Val Gly Leu Gln Pro Val
 50 55 60
 Cys Pro Gln Gly Thr Thr Cys Ile Asn Thr Gly Gly Ser Phe Gln Cys
 65 70 75 80
 Val Ser Pro Glu Cys Pro Glu Gly Ser Gly Asn Val Ser Tyr Val Lys
 85 90 95
 Thr Ser Pro Phe Gln Cys Glu Arg Asn Pro Cys Pro Met
 100 105

<210> 5689
 <211> 1897
 <212> DNA
 <213> Homo sapiens

<400> 5689
 nagtactaca aaatgtctgg cacatgacag atgctcatga taaaatgttt gacagttgaa
 60

```

      1             5             10             15
Gln Gln Asn Lys Leu Phe Tyr Pro Glu His His Ser Tyr Ala Leu Glu
      20             25             30
His Cys Ile Ser Leu Leu Leu Thr Arg Lys Gln Gln Cys Asn Tyr Ser
      35             40             45
His Val Asn Arg Gly Cys Ala Ser His Val Val Pro Ser Glu Ser Ile
      50             55             60
Gly Trp Ile Val Cys Val Pro Trp Leu Met Leu Thr His Gln Tyr Arg
      65             70             75             80
Ser Ala Leu Arg Val Cys Arg Asp Gly Gln Cys Leu Thr Ala Glu Ala
      85             90             95
Ser Leu Gly Gln Arg Met Asp
      100

```

<210> 5685

<211> 604

<212> DNA

<213> Homo sapiens

<400> 5685

```

ccatgcagcc gcgtgggtgg caagcgggtg gtgtgctatg acgacagatt cattgtgaag
60
ctggcctacg agtctgacgg gatcgtggtt tccaacgaca cataccgtga cctccaaggc
120
gagcggcagg agtgggaagcg cttcatcgag gagcggctgc tcatgtactc cttcgtcaat
180
gacaagtatg ttccctccca gaggcctga cagacttggg gtccacaggg gaagccagag
240
gtgcccttgg caaggggtgga gctgggggct gggctctgcg gggccctgtg gccatgggag
300
gttgcgggtc ttggctccag gcagctttga gagtgaagac gatagctcac cacataggag
360
aaatcagacc gggaccaggc aggctgtggg gtggagagag tggctaattt gggagataga
420
gccgtagcac ttatgagggg atgtatgtgg ttgatgggtc caggtggcct ctctacgaac
480
caacatggca tctctcgagc agaggccatg ggccagtggg tgcgggctgc catccccga
540
cgacttcagg gagggagttc ccctaaaggt gcccatgggc tgtggccctc tagaccgggg
600
atcc
604

```

<210> 5686

<211> 69

<212> PRT

<213> Homo sapiens

<400> 5686

```

Pro Cys Ser Arg Val Gly Gly Lys Arg Val Val Cys Tyr Asp Asp Arg
  1             5             10             15
Phe Ile Val Lys Leu Ala Tyr Glu Ser Asp Gly Ile Val Val Ser Asn
      20             25             30
Asp Thr Tyr Arg Asp Leu Gln Gly Glu Arg Gln Glu Trp Lys Arg Phe

```

<213> Homo sapiens

<400> 5682

```

Met Glu Ala Glu Thr Lys Thr Leu Pro Leu Glu Asn Ala Ser Ile Leu
 1             5             10             15
Ser Glu Gly Ser Leu Gln Glu Gly His Arg Leu Trp Ile Gly Asn Leu
      20             25             30
Asp Pro Lys Ile Thr Glu Tyr His Leu Leu Lys Leu Leu Gln Lys Phe
      35             40             45
Gly Lys Val Lys Gln Phe Asp Phe Leu Phe His Lys Ser Gly Ala Leu
      50             55             60
Glu Gly Gln Pro Arg Gly Tyr Cys Phe Val Asn Phe Glu Thr Lys Gln
65             70             75             80
Glu Ala Glu Gln Ala Ile Gln Cys Leu Asn Gly Lys Leu Ala Leu Ser
      85             90             95
Lys Lys Leu Val Val Arg Trp Ala His Ala Gln Val Lys Arg Tyr Asp
      100            105            110
His Asn Lys Asn Asp Lys Ile Leu Pro Ile Ser Leu Glu Pro Ser Ser
      115            120            125
Ser Thr Glu Pro Thr Gln Ser Asn Leu Ser Val Thr Ala Lys Ile Lys
      130            135            140
Ala Ile Glu Ala Lys Leu Lys Met Met Ala Glu Asn Pro Asp Ala Glu
145            150            155            160
Tyr Pro Ala Ala Pro Val Tyr Ser Tyr Phe Lys Pro Pro Asp Lys Lys
      165            170            175
Arg Thr Thr Pro Tyr Ser Arg Thr Ala Trp Lys Ser Arg Arg
      180            185            190

```

<210> 5683

<211> 328

<212> DNA

<213> Homo sapiens

<400> 5683

```

ggatccatgc gttgccctag ggaggcctca gctgtcaagc actgaccatc tctgcagaca
60
cgcagggctg acctgtactg gtgagtaagc attagccatg ggacgcacac aatccagcca
120
atgctttcag aaggcaccac atgtgatgca cagcctctat ttacatgtga ataattacac
180
tgctgctttc tgggtaaaag tagggaaata cagtgttcca gggcatagga atgggtgctct
240
gggtagaaaa gtttattttg ctggtgggag gcagggtttg ttaataaagc tttgaaatac
300
acaaatttca ttctggatgc tgatgctg
328

```

<210> 5684

<211> 103

<212> PRT

<213> Homo sapiens

<400> 5684

```

Met Lys Phe Val Tyr Phe Lys Ala Leu Leu Thr Lys Pro Ala Ser His

```

<400> 5681

gggcggcctg gcagctggcg gcattgagcg ggaccgtcta gaggtccgtc tgaccgcggc
60
gtcgggacct gggttccggg catgagctga gagcaccacg ccgaggccac gagtatttca
120
tagacattga tggaagcaga aacccaaaact cttcccctgg agaatgcac catcctttca
180
gagggctctc tgcaggaagg acaccgatta tggattggca acctggaccc caaaattacc
240
gaataccacc tcctcaagct cctccagaag tttggcaagg taaagcagtt tgacttcctc
300
ttccacaagt caggtgcttt ggagggacag cctcgaggct actgttttgt taactttgaa
360
actaagcagg aagcagagca agccatccag tgtctcaatg gcaagttggc cctgtccaag
420
aagctggtgg tgcgatgggc acatgctcaa gtaaagagat atgatcataa caagaatgat
480
aagattcttc caatcagtct cgagccatcc tcaagcactg agcctactca gtctaacctc
540
agtgtcactg caaagataaa agccattgaa gcaaaaactga aaatgatggc ggaaaaatcct
600
gatgcagagt atccagcagc gcctgtttat tctacttta agccaccaga taaaaaagg
660
actactccat attctagaac agcatggaaa tctcgaagat gatggttggt aattactgta
720
gcagcaaaaag caaattggtc tccacaccta aaatcgtctg cctgtgtact ttgtagatgt
780
gaatggtact attcaacgga gcacaatcac atgttagcat ttggtaacat aatgtttttg
840
gatgttctta tggatgtttc ttcctaaac tatgtatgga attgagcacc atccagaata
900
aatagcgttg tatcccaa atgtgattga accctgggat gctctaattg gctggttggt
960
ttggatttgt aactccagaa acattctata gtgtgccaga gcaaaaaggca aatacacaaa
1020
atattattta aatcaggaaa ctaaaaatat taacatctat taaaaaattg agcatttttc
1080
tacgtcgtg tgtcttttac aacataaaga aaaagtaaaa ggcagggagg gaagtgagag
1140
acagatttta aatcatgttc agaactgttg ttccagaatt tactacggca atccctccaa
1200
ctggactgaa aaagagaaaag ttcttggcaa aaaggagctg attctttgaa caaatgttgt
1260
agtaatctgt ttaagaatta tgcttattgt ttcaaaatcc caactaggaa aacatggtgt
1320
atatcttaaa attgtttgtg ttgacaaaac tagaatcaaa tttaacattt tataccacat
1380
cacaagttct atttgggata tt
1402

<210> 5682

<211> 190

<212> PRT

nngcccctcc aggagggagc cgggagatta cgcagctcca thtaggtcta cgtttaggtt
 60
 gggaggatct accatgaaga aggtcaagaa gaaaagggtca gaggccagac gccaccggac
 120
 tccacctccc agcatgctgg ctccaattcc acctctcagc agcctagccc tgaatccaca
 180
 ccacagcagc ctagtctctga atccacacca cagcagccta gccctgaatc cacaccacag
 240
 cattccagcc ttgaaaccac ctcccggcag ccagcattcc aagcccttcc agcaccggaa
 300
 atccgcccgt cctcttgctg ccttttatct ccagatgcta acgtgaaggc agccctcaa
 360
 tccaggaag cagaaaatct tcaagaaaac cctccagtca tcgtaacgcy tgcctccaa
 420
 gccctcgga ctgtggctgt ggctctgggg gctctaggag ctgcctacta catcactgaa
 480
 tccttgtaa caagccccta ggcccacagt ctggcagacc tccaccagcc ccaggagttg
 540
 ataggtgatg gcgctgggag aagatgttca gaatatctca aaagccaagt ccagaagatc
 600
 cagtttccat caaagggacc tctcttgta ccaaaattta aaaaaagaaa aaaaaaacga
 660
 aaaaa
 665

<210> 5680
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 5680
 Val Gly Arg Ile Tyr His Glu Glu Gly Gln Glu Glu Lys Val Arg Gly
 1 5 10 15
 Gln Thr Pro Pro Asp Ser Thr Ser Gln His Ala Gly Ser Asn Ser Thr
 20 25 30
 Ser Gln Gln Pro Ser Pro Glu Ser Thr Pro Gln Gln Pro Ser Pro Glu
 35 40 45
 Ser Thr Pro Gln Gln Pro Ser Pro Glu Ser Thr Pro Gln His Ser Ser
 50 55 60
 Leu Glu Thr Thr Ser Arg Gln Pro Ala Phe Gln Ala Leu Pro Ala Pro
 65 70 75 80
 Glu Ile Arg Arg Ser Ser Cys Cys Leu Leu Ser Pro Asp Ala Asn Val
 85 90 95
 Lys Ala Ala Pro Gln Ser Arg Lys Ala Glu Asn Leu Gln Glu Asn Pro
 100 105 110
 Pro Val Ile Val Thr Arg Val Leu Gln Ala Leu Gly Thr Val Ala Val
 115 120 125
 Ala Leu Gly Ala Leu Gly Ala Ala Tyr Tyr Ile Thr Glu Ser Leu
 130 135 140

<210> 5681
 <211> 1402
 <212> DNA
 <213> Homo sapiens

<212> DNA

<213> Homo sapiens

<400> 5677

```
agcagctggt cctctttgaa gaggtcgtatg ctgaaaggag gccgcctgac tccatggcaa
60
aaaaggacac tggatgaagta gcggtagcac tcctccacgt tgcccaaggg ggttgctggt
120
agggaagca agatgcagca gtgaggccct ctctggtatc cattcattca cttcactcaa
180
cagctgttta tgacctgag caatacaagc cttgtgaaga tcctggagca gggcacaagc
240
cgctgacgtc tgctccagtg agaagccctg ctgccttccc caattcgctt tctttccgca
300
gccgccgctg ccccgacccc ggatctgcat gtggaagtac ctggacgtcc attccatgca
360
ccagctggag aagaccacca atgctgagat gagggagggtg ctggctgagc tgctggagct
420
agggtgtcct gacgagagcc tgagcgacgc catcacctg gacctcttct gccgcgg
477
```

<210> 5678

<211> 151

<212> PRT

<213> Homo sapiens

<400> 5678

```
Met Ala Ser Leu Arg Leu Cys Ser Gly His Pro Ser Ser Ser Ser Ser
  1           5           10           15
Ala Ser Thr Ser Leu Ile Ser Ala Leu Val Val Phe Ser Ser Trp Cys
      20           25           30
Met Glu Trp Thr Ser Arg Tyr Phe His Met Gln Ile Arg Gly Arg Gly
      35           40           45
Ser Gly Gly Cys Gly Lys Lys Ala Asn Trp Gly Arg Gln Gln Gly Phe
      50           55           60
Ser Leu Glu Gln Thr Ser Ala Ala Cys Ala Leu Leu Gln Asp Leu His
      65           70           75           80
Lys Ala Cys Ile Ala His Gly His Lys Gln Leu Leu Ser Glu Val Asn
      85           90           95
Glu Trp Ile Pro Glu Arg Ala Ser Leu Leu His Leu Ala Phe Pro Thr
      100          105          110
Ser Asn Pro Leu Gly Gln Arg Gly Gly Val Leu Pro Leu Leu His Gln
      115          120          125
Cys Pro Phe Leu Pro Trp Ser Gln Ala Ala Ser Phe Gln His Arg Pro
      130          135          140
Leu Gln Arg Gly Thr Ala Ala
145          150
```

<210> 5679

<211> 665

<212> DNA

<213> Homo sapiens

<400> 5679

gtggtctcta ggcccaggc cccaaggaga gggctgggtt tctgggagag tgctggctct
 420
 tctctcttgg gcttggccat cttgacagct tcatcgtagg aggggtggagg ctccgggggtg
 480
 tacaggctgt aggcaggagg agccgtggag tccaggtcca gctccccaaa gggcaggggc
 540
 aaccgcatgc ccagtgggta ctgcacggag ctgtaggagg tcacagtgt gtgtacaggg
 600
 ctgtcactgt ccatagggat gactgccacg tcgcagggct gccgtgctgg tggcagatgt
 660
 ggctgggcct gtgcctgctt ccggaggcag cagaaccgga cacaaccagc tgtgacacca
 720
 cacagcagaa gcaggaggac cgccagcagg atgagcctag gagagcaagg ctctaccact
 780
 ggactgacct tcggccaccg ggcacctgca ccttggggaa tgtcgtggca caaccaccga
 840
 agacaggtta acaggataaa aagcagacaa tgtctctcca tgtcggagac cgccgtggcc
 900
 agagcctggc ctggggctgc tgggcctgcc ctggctatct ctctggggct ggccaggggt
 960
 ggccttgggc tcactcccag gactcgtgt cctcagcgag tgccccactg ctgagcggga
 1020
 tcgtagggga ctcccgcgga ggccaggcgg gagagtggg aggggaaggtc ctgg
 1074

<210> 5676

<211> 145

<212> PRT

<213> Homo sapiens

<400> 5676

Glu	Val	Thr	Val	Leu	Cys	Thr	Gly	Leu	Ser	Leu	Ser	Ile	Gly	Met	Thr
1				5				10					15		
Ala	Thr	Ser	Gln	Gly	Cys	Arg	Ala	Gly	Gly	Arg	Cys	Gly	Trp	Ala	Cys
			20				25					30			
Ala	Cys	Phe	Arg	Arg	Gln	Gln	Asn	Arg	Thr	Gln	Pro	Ala	Val	Thr	Pro
		35				40				45					
His	Ser	Arg	Ser	Arg	Arg	Thr	Ala	Ser	Arg	Met	Ser	Leu	Gly	Glu	Gln
	50				55					60					
Gly	Ser	Thr	Thr	Gly	Leu	Thr	Leu	Gly	His	Arg	Ala	Pro	Ala	Pro	Trp
65				70					75					80	
Gly	Met	Ser	Trp	His	Asn	His	Arg	Arg	Gln	Val	Asn	Arg	Ile	Lys	Ser
			85				90					95			
Arg	Gln	Cys	Leu	Ser	Met	Ser	Glu	Thr	Ala	Val	Ala	Arg	Ala	Trp	Pro
		100					105					110			
Arg	Ala	Ala	Gly	Pro	Ala	Leu	Ala	Ile	Ser	Pro	Gly	Leu	Ala	Arg	Gly
	115					120					125				
Gly	Leu	Gly	Leu	Thr	Pro	Arg	Thr	Arg	Cys	Pro	Gln	Arg	Val	Pro	His
	130					135					140				
Cys															
145															

<210> 5677

<211> 477

gccagactga gcagctcttc tctgcggggg aagaggttct tgcgcttctg agcaccaatg
 900
 catcttctaa cagctccatc ttcttgctga actgcacttc taaaatgggg ataacctctg
 960
 gcacgttggc agatatcaaa cgataggcca tgtctggctt tccaataaac cgctggcgga
 1020
 tgctaatttc gtaaggtagag tggaccttga tgcgtccac gtcttctctt tcaaacctgt
 1080
 gcacgagcaa agaactggag tcatgtattt ccaaccaga cacaaggacg gtgagcctcc
 1140
 ctggtttaac gtgagactct gttctgtggg aaataacagc aggaattttt atcagtatcc
 1200
 cttctttccc aaagggttca caactgggtca tggagacatc ttccctgggc tttgtttccg
 1260
 gtggtgtctt ccaaagctt
 1279

<210> 5674

<211> 81

<212> PRT

<213> Homo sapiens

<400> 5674

Leu	His	Ser	Gln	Ile	Tyr	Ser	Thr	Ala	Lys	Lys	Ala	Ser	Leu	Ser	Met
1				5					10				15		
Lys	Gly	Ser	Arg	Asp	Lys	Thr	Arg	Ala	Ala	Ser	Ser	Arg	Pro	Val	Pro
			20					25					30		
Ser	Val	Leu	Gly	Val	Pro	Pro	Trp	Ser	Thr	Leu	Leu	Gln	His	Pro	Gln
		35					40					45			
Asn	Met	Trp	Pro	Gly	Pro	Ala	Gln	Gln	Gly	Gln	Pro	Ser	Gly	Arg	
	50					55				60					
Gln	Ala	Trp	Cys	Thr	Pro	Gly	Glu	Ala	Pro	Gly	Ala	Glu	Ala	Ala	Pro
65					70					75					80
Gln															

<210> 5675

<211> 1074

<212> DNA

<213> Homo sapiens

<400> 5675

nttttccact taaatacaaa ctttattctc tctccaagaa gatgcagacg tcacagggtg
 60
 ccctgagctc ccacccgagg cttaggccca aggggcctct tccaggctga gggcctgctg
 120
 gggctggggc aggggctgag gctgaaagca gcagcctgcc tagtgggtga cgccaggggc
 180
 cgggtgaaca tggcaccgag gttggggcca cagcaatgtg tgggacggtg ggggtgggctg
 240
 gggcccttgg ctccaagcat tagttctcca agctctggtc cgttctctta cctccttcaa
 300
 ggggcaccag ggctacaagg tggtagttga gtattggggc ccgactcctg gggcactgga
 360

Glu Ala Ile Ser Gly Ile His Asp Gln Glu Asp Gly Glu Gln Cys Lys
 85 90 95
 Ser Val Phe His Trp Asp Met Lys Ser Lys Asp Lys Glu Gly Ala Pro
 100 105 110
 Asn Arg Gln Pro Leu Ala Asn Glu Arg Ala Tyr Trp Thr Gly Tyr Gly
 115 120 125
 Glu Gly Asn Ala Trp Cys Pro Gly Ala Leu Pro Asp Pro Glu Ile Val
 130 135 140
 Arg Met Val Glu Ala Arg Lys Ser Leu Gly Glu Glu Tyr Thr Glu Asp
 145 150 155 160
 Tyr Glu Gln Pro Arg Gly Lys Gly Ser Phe Pro Ala Met Ile Thr Pro
 165 170 175
 Ala Tyr Gln Arg Ala Lys Lys Ala Asn Gln Leu Ala Ser Gln Val Glu
 180 185 190
 Tyr Lys Arg Gly His Asp Glu Arg Ile Ser Arg Phe Ser Thr Val Ala
 195 200 205
 Asp Thr Pro Glu Leu Leu Arg Ser Lys Ala Trp Gly
 210 215 220

<210> 5673

<211> 1279

<212> DNA

<213> Homo sapiens

<400> 5673

nttttttttt ttggaagcca gcatttcctt ttatttcttg atggaaacgg ggccttaaaa
 60
 gcagaaatca atatttttgt ttgaaagatg cagtcattgct aatttcactt ttggctaaaa
 120
 ccgagacgat aaaagaacag ttgggtgttt ataggatgcc ctcaaagtga gctggctaag
 180
 ttagctgggc tctaacttca ctcaaaatt tatagtagcag ctaagaaggc cagtctgtcc
 240
 atgaaagga gccagacaa gacgagggcg gcctcttcca ggctgtgcc aagtgtcctt
 300
 ggggtccgc catggtccac acttctgcag catccgcaga acatgtggcc gggctcctgcc
 360
 cagcagcagg gacagccaag tgggaggcag gcatgggtgca cacctgggga ggccccctggt
 420
 gcagaagcag cccacagta gcagcccat ccagaggaag accactccgg agggccacag
 480
 gcctctgcag ccctggcact gccgcccagc cctccatctc agcgggatgt gcagggtgag
 540
 acaggaatgc agggacgttc tgcccctagg tcagcctctt catccgcctg ttgtgcttcg
 600
 atggtcaagg ttgccctgtc cacagctgct gcaacgccat ccagggttc gtcttgtctc
 660
 tccagctcac tctcgccctc cgggccagcc ccttcactct cctcaggatc tgggttagtt
 720
 cctgggtatc tgcctcagaa agggctggca ggcttgtctg caggtgcagt gctgtgccct
 780
 cctgggtctc tgccgggtggc tcacggtgca gggtacggcc catcagccca gatgctgcat
 840

	565	570	575
His Trp Ile Lys Arg Gly Val Ala Leu Ile Cys Ala Leu Asp Tyr			
	580	585	590

<210> 5671

<211> 818

<212> DNA

<213> Homo sapiens

<400> 5671

nngcgcgcca gggaaagtgg aagttggatt ctgaaagatc gaggtgcccc caggaatttt
60

atggtcgctcg gattttgaag acttgaacta gactgggggt tctccttgca tttcttgcct
120

gttgccctatc tttgtcctct ctcttccggc ttcgagatga atgtgcagcc ctgttctagg
180

tgtgggtatg gggtttatcc tgccgagaag atcagctgta tagatcagat atggcataaa
240

gcctgttttc actgtgaagt ttgcaagatg atgctgtctg ttaataactt tgtgagtcac
300

cagaaaaagc cgtactgtca cgcccataac cctaagaaca acactttcac cagtgtctat
360

cacactccat taaatctaaa tgtgaggaca tttccagagg ccatcagtgg gatccatgac
420

caagaagatg gtgaacagtg taaatcagtt tttcattggg acatgaaatc caaggataag
480

gaagggtcac ctaacaggca gccactggca aatgagagag cctattggac tggatatggg
540

gaagggaatg cttggtgccc aggagctctg ccagaccccg aaattgtaag gatgggttag
600

gctcgaaagt ctcttggtga ggaatataca gaagactatg agcaaccagc gggcaagggg
660

agctttccag ccatgatcac acctgcttat caaagggccca agaaagccaa ccagctggcc
720

agccaagtgg agtataagag agggcatgat gaacgcatct ccagggttctc cacgggtggcg
780

gatactcctg agctgctacg gagcaaggct tggggcac
818

<210> 5672

<211> 220

<212> PRT

<213> Homo sapiens

<400> 5672

Met	Asn	Val	Gln	Pro	Cys	Ser	Arg	Cys	Gly	Tyr	Gly	Val	Tyr	Pro	Ala
1			5						10					15	

Glu	Lys	Ile	Ser	Cys	Ile	Asp	Gln	Ile	Trp	His	Lys	Ala	Cys	Phe	His
			20					25					30		

Cys	Glu	Val	Cys	Lys	Met	Met	Leu	Ser	Val	Asn	Asn	Phe	Val	Ser	His
		35					40					45			

Gln	Lys	Lys	Pro	Tyr	Cys	His	Ala	His	Asn	Pro	Lys	Asn	Asn	Thr	Phe
		50				55					60				

Thr	Ser	Val	Tyr	His	Thr	Pro	Leu	Asn	Leu	Asn	Val	Arg	Thr	Phe	Pro
65					70				75					80	

130	135	140
Leu Ser Leu Cys Leu Phe His Gly Asn Ala Leu Glu Arg Arg Lys Phe		
145	150	155
Gly Pro Leu Gly Phe Asn Ile Pro Tyr Glu Phe Thr Asp Gly Asp Leu		160
	165	170
Arg Ile Cys Ile Ser Gln Leu Lys Met Phe Leu Asp Glu Tyr Asp Asp		175
	180	185
Ile Pro Tyr Lys Val Leu Lys Tyr Thr Ala Gly Glu Ile Asn Tyr Gly		190
	195	200
Gly Arg Val Thr Asp Asp Trp Asp Arg Arg Cys Ile Met Asn Ile Leu		205
	210	215
Glu Asp Phe Tyr Asn Pro Asp Val Leu Ser Pro Glu His Ser Tyr Ser		220
	225	230
Ala Ser Gly Ile Tyr His Gln Ile Pro Pro Thr Tyr Asp Leu His Gly		235
	245	250
Tyr Leu Ser Tyr Ile Lys Ser Leu Pro Leu Asn Asp Met Pro Glu Ile		255
	260	265
Phe Gly Leu His Asp Asn Ala Asn Ile Thr Phe Ala Gln Asn Glu Thr		270
	275	280
Phe Ala Leu Leu Gly Thr Ile Ile Gln Leu Gln Pro Lys Ser Ser Ser		285
	290	295
Ala Gly Ser Gln Gly Arg Glu Glu Ile Val Glu Asp Val Thr Gln Asn		300
	305	310
Ile Leu Leu Lys Val Pro Glu Pro Ile Asn Leu Gln Trp Val Met Ala		315
	325	330
Lys Tyr Pro Val Leu Tyr Glu Glu Ser Met Asn Thr Val Leu Val Gln		335
	340	345
Glu Val Ile Arg Tyr Asn Arg Leu Leu Gln Val Ile Thr Gln Thr Leu		350
	355	360
Gln Asp Leu Leu Lys Ala Leu Lys Gly Leu Val Val Met Ser Ser Gln		365
	370	375
Leu Glu Leu Met Ala Ala Ser Leu Tyr Asn Asn Thr Val Pro Glu Leu		380
	385	390
Trp Ser Ala Lys Ala Tyr Pro Ser Leu Lys Pro Leu Ser Ser Trp Val		395
	405	410
Met Asp Leu Leu Gln Arg Leu Asp Phe Leu Gln Ala Trp Ile Gln Asp		415
	420	425
Gly Ile Pro Ala Val Phe Trp Ile Ser Gly Phe Phe Phe Pro Gln Ala		430
	435	440
Phe Leu Thr Gly Thr Leu Gln Asn Phe Ala Arg Lys Phe Val Ile Ser		445
	450	455
Ile Asp Thr Ile Ser Phe Asp Phe Lys Val Met Phe Glu Ala Pro Ser		460
	465	470
Glu Leu Thr Gln Arg Pro Gln Val Gly Cys Tyr Ile His Gly Leu Phe		475
	485	490
Leu Glu Gly Ala Arg Trp Asp Pro Glu Ala Phe Gln Leu Ala Glu Ser		495
	500	505
Gln Pro Lys Glu Leu Tyr Thr Glu Met Ala Val Ile Trp Leu Leu Pro		510
	515	520
Thr Pro Asn Arg Lys Ala Gln Asp Gln Asp Phe Tyr Leu Cys Pro Ile		525
	530	535
Tyr Lys Thr Leu Thr Arg Ala Gly Thr Leu Ser Thr Thr Gly His Ser		540
	545	550
Thr Asn Tyr Val Ile Ala Val Glu Ile Pro Thr His Gln Pro Gln Arg		555
	560	

attctgctca aggtgcctga gcctatcaac ttgcaatggg tgatggccaa gtacccagtg
 1020
 ctgtatgagg aatcaatgaa cacagtacta gtacaagagg tcattaggta caatcggctg
 1080
 ctgcaggtga tcacacagac actgcaagac ctactcaagg cactcaaggg gctggtagtg
 1140
 atgtcctctc agctggagct gatggctgcc agcctgtaca acaatactgt gcctgagctc
 1200
 tggagtgcc aaggcctaccc atcgctcaag cctctgtcat catgggtcat ggacctgctg
 1260
 caacgcctgg actttctgca ggcttgatc caagatggca tcccagctgt cttctggatc
 1320
 agtggattct tcttccccca ggctttctta acaggcactc tgcagaattt tgcccgcaaa
 1380
 tttgtcatct ccattgacac catctccttt gatttcaagg tgatgtttga ggcaccatca
 1440
 gagttaacac aaagacccca agtagggtgc tatatccatg gattattcct ggaaggtgcc
 1500
 cgctgggatc cagaggcctt ccagctggct gagtctcagc ccaaggagct gtacacagag
 1560
 atggccgtta tctggctctt gccaacaccc aaccgcaagg cccaggacca ggacttttac
 1620
 ctgtgccccca tctacaagac actgactcgt gctggaacac tatcaaccac aggacactct
 1680
 accaactatg tcattgctgt ggagatcccc acccatcagc cccagcgaca ctggataaag
 1740
 cgtgggtgtg ccctcatctg tgccctggac tactagactc agacagaagg gctggggcca
 1800
 ttaaagctga attttctaag caaaaaaaaa aaaaaaaaaa aa
 1842

<210> 5670

<211> 591

<212> PRT

<213> Homo sapiens

<400> 5670

Phe	Val	Leu	Ser	Pro	Gly	Thr	Asp	Pro	Ala	Ala	Asp	Leu	Tyr	Lys	Phe
1				5				10					15		
Ala	Glu	Glu	Met	Lys	Phe	Ser	Lys	Lys	Leu	Ser	Ala	Ile	Ser	Leu	Gly
			20					25					30		
Gln	Gly	Gln	Gly	Pro	Arg	Ala	Glu	Ala	Met	Met	Arg	Ser	Ser	Ile	Glu
			35					40					45		
Arg	Gly	Lys	Trp	Val	Phe	Phe	Gln	Asn	Cys	His	Leu	Ala	Pro	Ser	Trp
			50					55				60			
Met	Pro	Ala	Leu	Glu	Arg	Leu	Ile	Glu	His	Ile	Asn	Pro	Asp	Lys	Val
65					70					75				80	
His	Arg	Asp	Phe	Arg	Leu	Trp	Leu	Thr	Ser	Leu	Pro	Ser	Asn	Lys	Phe
			85					90					95		
Pro	Val	Ser	Ile	Leu	Gln	Asn	Gly	Ser	Lys	Met	Thr	Ile	Glu	Pro	Pro
			100					105					110		
Arg	Gly	Val	Arg	Ala	Asn	Leu	Leu	Lys	Ser	Tyr	Ser	Ser	Leu	Gly	Glu
			115				120						125		
Asp	Phe	Leu	Asn	Ser	Cys	His	Lys	Val	Met	Glu	Phe	Lys	Ser	Leu	Leu

	35		40		45	
Lys	Glu	Ile	Arg	Gln	Val	Val
	50			55		60
Ala	Met	Met	Phe	Arg	Gln	Arg
65				70		75
Asn	Met	Leu	Asp	Val	Gln	Gly
				85		90
Ser	Ser	Leu	Leu	Asn	Ala	Lys
				100		105
Arg	Lys	Val	Lys	Gln	Tyr	Leu
				115		120
Glu	Lys	Phe	Gln	Met	Met	Ser
				130		135
Cys	Glu	Tyr	Lys	Phe	Ser	Phe
145				150		Met

<210> 5669

<211> 1842

<212> DNA

<213> Homo sapiens

<400> 5669

```

tttgtgctgt caccgcggcac agaccctgct gccgacctct acaagtttgc cgaagaaatg
60
aagttctcca aaaagctctc tgccatctcc ctggggccagg ggcagggccc tcgggcagaa
120
gccatgatgc gcagctccat agagaggggc aaatgggtct tcttcagaa ctgccacctg
180
gcaccaagct ggatgccagc cctagaacgc ctcctcgagc acatcaaccc cgacaaggta
240
cacagggact tccgcctctg gctcaccagc ctgcccagca acaagttccc agtgtccatc
300
ctgcagaacg gctccaagat gaccattgag ccgccacgcg gtgtcagggc caacctgctg
360
aagtcctata gtagccttgg tgaagacttc ctcaactcct gccacaaggt gatggagtgc
420
aagtctctgc tgctgtctct gtgcttggtc catgggaacg ccctggagcg ccgtaagttt
480
gggcccctgg gcttcaacat cccctatgag ttcacggatg gagatctgcg catctgcatc
540
agccagctca agatgttcct ggacgaatat gatgacatcc cctacaaggt cctcaagtac
600
acggcagggg agatcaatta cgggggcccgt gtcactgatg actgggacgg gcgctgcatc
660
atgaacatct tggaggactt ctacaaccct gacgtgctct ccctgagca cagctacagc
720
gcctcgggca tctaccacca gatcccgccct acctacgacc tccacggcta cctctcctac
780
atcaagagcc tcccactcaa tgatatgcct gagatctttg gcctgcatga caatgccaac
840
atcacctttg ccagaaacga gacgttcgcc ctctgggca ccatcatcca gctgcaaccc
900
aaatcatctt ctgcaggcag ccaggggccgg gaggagatag tggaggacgt caccctaaac
960

```

```

      35              40              45
Ala Val Pro Asp Ile Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly
      50              55              60
Arg Asn Ala Thr Val Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg
      65              70              75

```

<210> 5667

<211> 858

<212> DNA

<213> Homo sapiens

<400> 5667

```

nattcggcac gaggtagtca aagtatgcag cctccaatta ttccactctt ccctgttgct
60
aagaaagata tgacatttct acatgaagga aatgactcca aagtagatgg tttagtaaac
120
tttgagaagt taagaatgat ttccaaggaa atccgccaag ttgttcgaat gacttctgct
180
aacatggacc cagctatgat gtttcgacag aggtcactga gtcaaggaag cacaaattca
240
aacatgctgg atgttcaggg aggtgctcac aaaaaaaggg cacgccgcag ctctctgctt
300
aatgccaaga agctatatga ggatgcccaa atggcaagga aggtgaagca gtatctttcc
360
agtctcgatg tagagacaga tgaggagaag ttccagatga tgcattaca gntggagcct
420
gcatatggta cctgtgagta caagttttca tttatgtgac gctaaagagc acaacaaaat
480
aaaaacttat ttctctagaa ttatacctaa gtccaagaa aattaacttt cactcacaaa
540
agattgctgg cataccttaa gcatcatgtg atccaattaa tcacagactg aatccccatcc
600
attcctgatg gctacactat ccaaaaaata gagggataag tagatcttta aaaagctttt
660
taattctttt aaaaactgga tcattataga ggaggctttc tgtttgagaa catttttata
720
ttcatcccta aagagtaaac ataagtggaa tttttacctc tttttatttc atggataata
780
tttaccact agaaaatata agaaatttga ttaaaacacc agtgataata ggtagcttac
840
aggtgccagt agtaaggt
858

```

<210> 5668

<211> 152

<212> PRT

<213> Homo sapiens

<400> 5668

```

Xaa Ser Ala Arg Gly Ser Gln Ser Met Gln Pro Pro Ile Ile Pro Leu
  1              5              10              15
Phe Pro Val Val Lys Lys Asp Met Thr Phe Leu His Glu Gly Asn Asp
      20              25              30
Ser Lys Val Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met Ile Ser

```



```

65          70          75          80
Pro Glu Leu Ile Lys Glu Ser Asn Ala Asn Pro Ile Phe Met Arg Lys
          85          90          95
Asp Thr Lys Met Ser Phe Gln Trp Arg Ile Arg Asn Leu Pro Tyr Pro
          100          105          110
Lys Asp Val Tyr Ser Val Ser Val Asp Gln Lys Glu Arg Cys Ile Ile
          115          120          125
Val Arg Thr Thr Asn Lys Lys Tyr Tyr Lys Lys Phe Ser Ile Pro Asp
          130          135          140
Leu Asp Arg His Gln Leu Pro Leu Asp Asp Ala Leu Leu Ser Phe Ala
          145          150          155          160
His Ala Asn Cys Thr Leu Ile Ile Ser Tyr Gln Lys Pro Lys Glu Val
          165          170          175
Val Val Ala Glu Ser Glu Leu Gln Lys Glu Leu Lys Lys Val Lys Thr
          180          185          190
Ala His Ser Asn Asp Gly Asp Cys Lys Thr Gln
          195          200

```

<210> 5665
 <211> 531
 <212> DNA
 <213> Homo sapiens

```

<400> 5665
gtcaagtcct gtaggcagca tagggccctg getcagcttt tctctgcaga ggctctgctt
60
gagtgggtgg gggttgcccg cccgcagatc tccacgggag ggggaggggt caggcctccc
120
cagcggccct ctgaagtcac ttgcttcacg gaggtgttac tgtctgctgc tggacagagc
180
atgatggggg ctgcaagggc tccctcaaac cctggactcc tccaacagag ggctcctggt
240
tgccaggctc agctctgccc tgcgtcggcc ccaggcgta gggaggggtgt ttaatcctgg
300
cccgggcctt cccgcaggt ggagcgcgtg tcgcaccgc tgctgcagca gcagtatgag
360
ctgtaccggg agcgctgct gcagcgatgc gagcggcgcc cggaggagca ggtgctgtac
420
cacggcacga cggcaccggc agtgctgac atctgcgccc acggcttcaa ccgcagcttc
480
tgcggccgca acgccacggt ctacgggaag ggcgtgtatt tcgccaggcg c
531

```

<210> 5666
 <211> 79
 <212> PRT
 <213> Homo sapiens

```

<400> 5666
Ser Trp Pro Gly Pro Ser Pro Gln Val Glu Arg Val Ser His Pro Leu
1          5          10          15
Leu Gln Gln Gln Tyr Glu Leu Tyr Arg Glu Arg Leu Leu Gln Arg Cys
20          25          30
Glu Arg Arg Pro Val Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro

```

145

<210> 5663

<211> 857

<212> DNA

<213> Homo sapiens

<400> 5663

```

tttttttttt ttttttttgc gtaagtaact cagaatgact ttactcagga aatatgacca
60
tgactcactg gctaggagtg ccccatgccc agttcttaga gacccttgat agctcctaga
120
agacaggagg ctgccgtggt caagaagggc caagccttga agtctcacgg caccctctgt
180
ggtggaggta taaggctcag gggccaacta ctgggtcttg cagtcccat cgttgctgtg
240
ggctgtcttc accttcttta gttccttctg tagctcagac tcggccacca caacctcctt
300
tggtcttctgg taagagatga tcagggtgca gttggcgtgg gcaaagctca gcaaggcgtc
360
atccagaggt agctggtgtc tatctagatc aggaatggag aacttcttgt agtacttctt
420
gttggttggt ctgacaatga tgcagcgctc cttctggtcc acagagacac tatagacatc
480
cttaggatag gggagggttc gaatccgcca ctggaaactc atcttggtgt ccttgcgcat
540
gaagatagga ttggcattgc tttccttgat gagttcaggc cccagggtcc ctgctcctag
600
gggcgctggg tctctactt caagctgcca ctggcccatg gctcccaggg cacttttcac
660
acgccacttt ctcacaagta gttcactcgt cttctcgtca tattcttcag ccatttcctt
720
gccgtctggg aataaatagt gaaccttcct tctcccgctc tgcagcagcg cagtcttctg
780
ggctgtccgc agactctcca accagcccgt caccgccatc tttcccctgc taagcagcac
840
gccagccgc tgccatg
857

```

<210> 5664

<211> 203

<212> PRT

<213> Homo sapiens

<400> 5664

```

Met Ala Val Thr Gly Trp Leu Glu Ser Leu Arg Thr Ala Gln Lys Thr
  1          5          10          15
Ala Leu Leu Gln Asp Gly Arg Arg Lys Val His Tyr Leu Phe Pro Asp
  20          25          30
Gly Lys Glu Met Ala Glu Glu Tyr Asp Glu Lys Thr Ser Glu Leu Leu
  35          40          45
Val Arg Lys Trp Arg Val Lys Ser Ala Leu Gly Ala Met Gly Gln Trp
  50          55          60
Gln Leu Glu Val Gly Asp Pro Ala Pro Leu Gly Ala Gly Asn Leu Gly

```

245

250

<210> 5661

<211> 578

<212> DNA

<213> Homo sapiens

<400> 5661

agagctcgaa ggggccatat gacactcctc ccggaccctt ggacacacac agccctgggg
 60
 actggatgcc ttggagcatg caagtccaga gcacctggg agccctgggtg catgggaccc
 120
 ataaccagtg gcacggcaag gacccagcag gaagcaccag ccactggccc cgacctcccg
 180
 caccaggac ctgacgggca cttagacaca cacagtggcc tgagctccaa ctccagcatg
 240
 accacgcggg agcttcagca gtactggcag aaccagaaat gccgctggaa gcacgtcaaa
 300
 ctgctctttg agatcgcttc agctcgcatc gaggagagaa aagtctctaa gtttgtgatg
 360
 gggaaatcaa ggcctggaga gatgacttat ccagggtcac gtggcgagac agggacagca
 420
 ccagaaccag acccgagatg tccacgtcaa agtgacatgc tctgagaggc agcacacaca
 480
 gaataaccct gcatccaaat tccaggaagc tcttaggggt catccagctg ggcctagggg
 540
 tgcagggtca gtgctgaggc ctgggcaggg ccgctagc
 578

<210> 5662

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5662

Met	Thr	Leu	Leu	Pro	Asp	Pro	Trp	Thr	His	Thr	Ala	Leu	Gly	Thr	Gly
1				5				10					15		
Cys	Leu	Gly	Ala	Cys	Lys	Ser	Arg	Ala	Pro	Trp	Glu	Pro	Trp	Cys	Met
			20					25				30			
Gly	Pro	Ile	Thr	Gln	Cys	Thr	Ala	Arg	Thr	Gln	Gln	Glu	Ala	Pro	Ala
			35				40					45			
Thr	Gly	Pro	Asp	Leu	Pro	His	Pro	Gly	Pro	Asp	Gly	His	Leu	Asp	Thr
			50			55				60					
His	Ser	Gly	Leu	Ser	Ser	Asn	Ser	Ser	Met	Thr	Arg	Glu	Leu	Gln	
65				70					75				80		
Gln	Tyr	Trp	Gln	Asn	Gln	Lys	Cys	Arg	Trp	Lys	His	Val	Lys	Leu	Leu
			85					90					95		
Phe	Glu	Ile	Ala	Ser	Ala	Arg	Ile	Glu	Glu	Arg	Lys	Val	Ser	Lys	Phe
			100					105				110			
Val	Met	Gly	Lys	Ser	Arg	Pro	Gly	Glu	Met	Thr	Tyr	Pro	Gly	Ser	Arg
			115				120					125			
Gly	Glu	Thr	Gly	Thr	Ala	Pro	Glu	Pro	Asp	Pro	Arg	Cys	Pro	Arg	Gln
			130			135					140				
Ser	Asp	Met	Leu												

tccaagccct ttaaggtgat ctgtatttac atttcctttt atagtacaga ttataaactg
 900
 gtacagaaag tgtgccctga ctacaactac cacagtgaca caccttactt tccctcgga
 960
 tgaaggtgaa catgggggtg agactgaagc ctgaggaatt aaaggtcata tgacagggct
 1020
 gttacctcaa agaagaaggt cacatctgtt gcctggaatg tgtctacact gctgctcttg
 1080
 tcaactggct gcaaaatata ctagtggaaa acactctgat gtaatttctg cccagtcagc
 1140
 ttcacccctc agtataattg taaatcatca cagattttga attcacacct gaagacatgc
 1200
 tctcacatat agaggtacac aaacacaccg tcatgcacat ttcagcttgc gtctatcatg
 1260
 att
 1263

<210> 5660

<211> 253

<212> PRT

<213> Homo sapiens

<400> 5660

Val	Thr	Cys	Ala	Asn	Leu	Thr	Asn	Gly	Gly	Lys	Ser	Glu	Leu	Leu	Lys
1				5				10					15		
Ser	Gly	Ser	Ser	Lys	Ser	Thr	Leu	Lys	His	Ile	Trp	Thr	Glu	Ser	Ser
			20					25					30		
Lys	Asp	Leu	Ser	Ile	Ser	Arg	Leu	Leu	Ser	Gln	Thr	Phe	Arg	Gly	Lys
	35						40					45			
Glu	Asn	Asp	Thr	Asp	Leu	Asp	Leu	Arg	Tyr	Asp	Thr	Pro	Glu	Pro	Tyr
	50					55					60				
Ser	Glu	Gln	Asp	Leu	Trp	Asp	Trp	Leu	Arg	Asn	Ser	Thr	Asp	Leu	Gln
65				70						75				80	
Glu	Pro	Arg	Pro	Arg	Ala	Lys	Arg	Arg	Pro	Ile	Val	Lys	Thr	Gly	Lys
				85					90					95	
Phe	Lys	Lys	Met	Phe	Gly	Trp	Gly	Asp	Phe	His	Ser	Asn	Ile	Lys	Thr
			100					105					110		
Val	Lys	Leu	Asn	Leu	Leu	Ile	Thr	Gly	Lys	Ile	Val	Asp	His	Gly	Asn
	115						120					125			
Gly	Thr	Phe	Ser	Val	Tyr	Phe	Arg	His	Asn	Ser	Thr	Gly	Gln	Gly	Asn
	130						135					140			
Val	Ser	Val	Ser	Leu	Val	Pro	Pro	Thr	Lys	Ile	Val	Glu	Phe	Asp	Leu
145				150						155				160	
Ala	Gln	Gln	Thr	Val	Ile	Asp	Ala	Lys	Asp	Ser	Lys	Ser	Phe	Asn	Cys
				165					170					175	
Arg	Ile	Glu	Tyr	Glu	Lys	Val	Asp	Lys	Ala	Thr	Lys	Asn	Thr	Leu	Cys
			180					185					190		
Asn	Tyr	Asp	Pro	Ser	Lys	Thr	Cys	Tyr	Gln	Glu	Gln	Thr	Gln	Ser	His
	195					200						205			
Val	Ser	Trp	Leu	Cys	Ser	Lys	Pro	Phe	Lys	Val	Ile	Cys	Ile	Tyr	Ile
	210					215					220				
Ser	Phe	Tyr	Ser	Thr	Asp	Tyr	Lys	Leu	Val	Gln	Lys	Val	Cys	Pro	Asp
225				230						235				240	
Tyr	Asn	Tyr	His	Ser	Asp	Thr	Pro	Tyr	Phe	Pro	Ser	Gly			

```

145          150          155          160
Ser Phe Trp Ile Pro Ser Leu Thr Pro Glu Ala Lys Ala Thr Lys Leu
          165          170          175
Glu Lys Pro Ser Arg Thr Val Thr Cys Pro Met Ser Gly Lys Pro Leu
          180          185          190
Arg Met Ser Asp Leu Thr Pro Val His Phe Thr Pro Leu Asp Ser Ser
          195          200          205
Val Asp Arg Val Gly Leu Ile Thr Arg Ser Glu Arg Tyr Val Cys Ala
          210          215          220
Val Thr Arg Asp Ser Leu Ser Asn Ala Thr Pro Cys Ala Val Leu Arg
225          230          235          240
Pro Ser Gly Ala Val Val Thr Leu Glu Cys Val Glu Lys Leu Ile Arg
          245          250          255
Lys Asp Met Val Asp Pro Val Thr Gly Asp Lys Leu Thr Asp Arg Asp
          260          265          270
Ile Ile Val Leu Gln Arg Gly Gly Thr Gly Phe Ala Gly Ser Gly Val
          275          280          285
Lys Leu Gln Ala Glu Lys Ser Arg Pro Val Met Gln Ala
          290          295          300

```

<210> 5659

<211> 1263

<212> DNA

<213> Homo sapiens

<400> 5659

```

nttttaaaac gtaattatgt aattctgaga ctctgggaga gggggcttag atctctgctt
60
tgggtgttct tctcagatgc ggtgctttta aaaaaaagtg taattattta atcctgagac
120
tcagagaagg cttagatcta tgcattgggt gttattctca gatgcagaga tgtaaatgcc
180
atcttctctt tctgttttca ggtcacatgt gccaatata cgaacgggtg aaagtcagaa
240
cttctgaaat caggaagcag caaatccaca ctaaagcaca tatggacaga aagcagcaaa
300
gacttgtcta tcagccgact cctgtcacag acttttcgtg gcaaagagaa tgatacagat
360
ttggacctga gatatgacac ccagaaacct tattctgagc aagacctctg ggactggctg
420
aggaactcca cagaccttca agagcctcgg ccagggcca agagaaggcc cattgttaaa
480
acgggcaagt ttaagaaaat gtttggtatg ggcgattttc attccaacat caaaacagtg
540
aagctgaacc tggtgataac tgggaaaatt gtagatcatg gcaatgggac atttagtggt
600
tatttcaggc ataattcaac tgggtcaagg aatgtatctg tcagcttggt accccctaca
660
aaaatcgtgg aatttgactt ggcacaacaa accgtgattg atgccaaaga ttccaagtct
720
tttaattgtc gcattgaata tgaaaagggt gacaaggcta ccaagaacac actctgcaac
780
tatgacctt caaaaacctg ttaccaggag caaacccaaa gtcattgtat ctggctctgc
840

```

tgctgttgtc tctccctgca gccttgccac gatactgttg tcaccccaga tggctacctg
 240
 tatgagcgtg aggccatcct ggagtacatt ctgcaccaga agaaggagat tgcccggcag
 300
 atgaaggcct acgagaagca gcggggcacc cggcgcgagg agcagaagga gcttcagcgg
 360
 gcggcctcgc aggaccatgt gcggggcttc ctggagaagg agtcggctat cgtgagccgg
 420
 cccctcaacc ctttcacagc caaggccctc tcgggcacca gcccagatga tgtccaacct
 480
 gggcccagtg tgggtcctcc aagtaaggac aaggacaaag tgctgcccag cttctggatc
 540
 ccgtcgctga cgcccgaagc caaggccacc aagctggaga agccgtcccg cacggtgacc
 600
 tgccccatgt cagggaagcc cctgcgcatg tcggacctga cgcccgtagc cttcacaccg
 660
 ctagacagct ccgtggaccg cgtggggctc atcaccgcga gcgagcgcta cgtgtgtgcc
 720
 gtgaccgcg acagcctgag caacgccacc ccctgcgctg tgctgcggcc ctctggggct
 780
 gtggtcacc tcgaatgcgt ggagaagctg attcggaagg acatggtgga ccctgtgact
 840
 ggagacaaac tcacagaccg cgacatcatc gtgctgcagc ggggcggtac cggttcgcg
 900
 ggctccggag tgaagctgca agcggagaaa tcacggccgg tgatgcaggc ctgagtgtgt
 960
 gcggggagacc aaataaaccg gcttgggtgc gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1020

<210> 5658

<211> 301

<212> PRT

<213> Homo sapiens

<400> 5658

Met	Thr	Arg	His	Gly	Lys	Asn	Cys	Thr	Ala	Gly	Ala	Val	Tyr	Thr	Tyr
1				5					10					15	
His	Glu	Lys	Lys	Lys	Asp	Thr	Ala	Ala	Ser	Gly	Tyr	Gly	Thr	Gln	Asn
			20					25					30		
Ile	Arg	Leu	Ser	Arg	Asp	Ala	Val	Lys	Asp	Phe	Asp	Cys	Cys	Cys	Leu
		35					40					45			
Ser	Leu	Gln	Pro	Cys	His	Asp	Pro	Val	Val	Thr	Pro	Asp	Gly	Tyr	Leu
	50					55				60					
Tyr	Glu	Arg	Glu	Ala	Ile	Leu	Glu	Tyr	Ile	Leu	His	Gln	Lys	Lys	Glu
65					70					75				80	
Ile	Ala	Arg	Gln	Met	Lys	Ala	Tyr	Glu	Lys	Gln	Arg	Gly	Thr	Arg	Arg
			85					90					95		
Glu	Glu	Gln	Lys	Glu	Leu	Gln	Arg	Ala	Ala	Ser	Gln	Asp	His	Val	Arg
			100					105				110			
Gly	Phe	Leu	Glu	Lys	Glu	Ser	Ala	Ile	Val	Ser	Arg	Pro	Leu	Asn	Pro
		115					120					125			
Phe	Thr	Ala	Lys	Ala	Leu	Ser	Gly	Thr	Ser	Pro	Asp	Asp	Val	Gln	Pro
	130						135				140				
Gly	Pro	Ser	Val	Gly	Pro	Pro	Ser	Lys	Asp	Lys	Asp	Lys	Val	Leu	Pro

660 665 670
 Gln Ser Pro Gly Gly Gly Gln Pro Leu Leu Gln Pro Thr Lys Val Asp
 675 680 685
 Ala Ala Glu Gly Arg Arg Pro Gln Ala Leu Arg Leu Ile Glu Arg Asp
 690 695 700
 Pro Tyr Glu His Pro Glu Arg Leu Arg Gln Leu Gln Gln Glu Leu Glu
 705 710 715 720
 Ala Phe Arg Gly Gln Leu Gly Asp Val Gly Ala Leu Asp Thr Val Trp
 725 730 735
 Arg Glu Leu Gln Asp Ala Gln Glu His Asp Ala Arg Gly Arg Ser Ile
 740 745 750
 Ala Ile Ala Arg Cys Tyr Ser Leu Lys Asn Arg His Gln Asp Val Met
 755 760 765
 Pro Tyr Asp Ser Asn Arg Val Val Leu Arg Ser Gly Lys Asp Asp Tyr
 770 775 780
 Ile Asn Ala Ser Cys Val Glu Gly Leu Ser Pro Tyr Cys Pro Pro Leu
 785 790 795 800
 Val Ala Thr Gln Ala Pro Leu Pro Gly Thr Ala Ala Asp Phe Trp Leu
 805 810 815
 Met Val His Glu Gln Lys Val Ser Val Ile Val Met Leu Val Ser Glu
 820 825 830
 Ala Glu Met Glu Lys Gln Lys Val Ala Arg Tyr Phe Pro Thr Glu Arg
 835 840 845
 Gly Gln Pro Met Val His Gly Ala Leu Ser Leu Ala Leu Ser Ser Val
 850 855 860
 Arg Ser Thr Glu Thr His Val Glu Arg Val Leu Ser Leu Gln Phe Arg
 865 870 875 880
 Asp Gln Ser Leu Lys Arg Ser Leu Val His Leu His Phe Pro Thr Trp
 885 890 895
 Pro Glu Leu Gly Leu Pro Asp Ser Pro Ser Asn Leu Leu Arg Phe Ile
 900 905 910
 Gln Glu Val His Ala His Tyr Leu His Gln Arg Pro Leu His Thr Pro
 915 920 925
 Ile Ile Val His Cys Ser Ser Gly Val Gly Arg Thr Gly Ala Phe Ala
 930 935 940
 Leu Leu Tyr Ala Ala Val Gln Glu Val Glu Ala Gly Asn Gly Ile Pro
 945 950 955 960
 Glu Leu Pro Gln Leu Val Arg Arg Met Arg Gln Gln Arg Lys His Met
 965 970 975
 Leu Gln Glu Lys Leu His Leu Arg Xaa Leu Leu
 980 985

<210> 5657

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 5657

tgcggacagt tgaagaagcg accgagggac tgggagtcgt tagtgaggat gacgcggcat
 60
 ggcaagaact gcaccgcagg cgccgtctac acctaccacg agaagaagaa ggacacagcg
 120
 gcctcgggct atgggaccca gaacattcga ctgagccggg atgccgtgaa ggacttcgac
 180

4831

gaggagccgc cagtgcctga agcccccagc tcggggcccc cctcctcctc cctggaattg
 3360
 ctggcctcct tgaccccaga ggccttctcc ctggacagct ccctgcgggg caaacagcgg
 3420
 atgagcaagc ataactttct gcaggcccat aacgggcaag ggctgcgggc caccgcggcc
 3480
 tctgacgacc ccctcagcct tctggatcca ctctggacac tcaacaagac ctgaacaggt
 3540
 tttgcctacc tggtccttac actacatcat catcatctca tgcccacctg cccacaccca
 3600
 gcagagcttc tcagtgggca cagtctctta ctccatttc tgctgccttt ggccctgcct
 3660
 ggcccagcct gcacccctgt ggggtggaaa tgtactgcag gctctgggtc aggttctgct
 3720
 cctttatggg acccgacatt ttccagctct ttgctattga aataataaac caccctgttc
 3780
 tgtggcccgt aaaaaaaaaa aaaaaaaaaa
 3810

<210> 5656

<211> 987

<212> PRT

<213> Homo sapiens

<400> 5656

Asp	Leu	Leu	Glu	Glu	Asp	Glu	Leu	Leu	Glu	Gln	Lys	Phe	Gln	Glu	Ala
1				5					10					15	
Val	Gly	Gln	Ala	Gly	Xaa	Pro	Ser	Pro	Ser	Xaa	Ser	Lys	Ala	Glu	Leu
			20					25					30		
Ala	Glu	Val	Arg	Arg	Glu	Trp	Ala	Lys	Tyr	Met	Glu	Val	His	Glu	Lys
			35				40					45			
Ala	Ser	Phe	Thr	Asn	Ser	Glu	Leu	His	Arg	Ala	Met	Asn	Leu	His	Val
	50					55					60				
Gly	Asn	Leu	Arg	Leu	Leu	Ser	Gly	Pro	Leu	Asp	Gln	Val	Arg	Ala	Ala
65				70					75					80	
Leu	Pro	Thr	Pro	Ala	Leu	Ser	Pro	Glu	Asp	Lys	Ala	Val	Leu	Gln	Asn
			85					90					95		
Leu	Lys	Arg	Ile	Leu	Ala	Lys	Val	Gln	Glu	Met	Arg	Asp	Gln	Arg	Val
			100					105					110		
Ser	Leu	Glu	Gln	Gln	Leu	Arg	Glu	Leu	Ile	Gln	Lys	Asp	Asp	Ile	Thr
	115						120					125			
Ala	Ser	Leu	Val	Thr	Thr	Asp	His	Ser	Glu	Met	Lys	Lys	Leu	Phe	Glu
	130					135					140				
Glu	Gln	Leu	Lys	Lys	Tyr	Asp	Gln	Leu	Lys	Val	Tyr	Leu	Glu	Gln	Asn
145				150					155					160	
Leu	Ala	Ala	Gln	Asp	Arg	Val	Leu	Cys	Ala	Leu	Thr	Glu	Ala	Asn	Val
			165					170					175		
Gln	Tyr	Ala	Ala	Val	Arg	Arg	Val	Leu	Ser	Asp	Leu	Asp	Gln	Lys	Trp
			180					185					190		
Asn	Ser	Thr	Leu	Gln	Thr	Leu	Val	Ala	Ser	Tyr	Glu	Ala	Tyr	Glu	Asp
	195						200					205			
Leu	Met	Lys	Lys	Ser	Gln	Glu	Gly	Arg	Asp	Phe	Tyr	Ala	Asp	Leu	Glu
	210					215					220				
Ser	Lys	Val	Ala	Ala	Leu	Leu	Glu	Arg	Thr	Gln	Ser	Thr	Cys	Gln	Ala

ccagggtcccg ctcaagaccc tctgccagcc cactcagggg ctctgccttt cccagccct
1740
gggccccctc agcctcccca tccccactg gcatatggtc ctgccccttc taccagaccc
1800
atgggcccc aggcagcccc tcttaccatt cgagggccct cgtctgctgg ccagtccacc
1860
cctagtcccc acctggtgcc ttcacctgcc ccatctccag ggcttggtcc ggtaccccct
1920
cgccccccag cagcagaacc acccccttgc ctgcgccgag gcgccgcagc tgcagacctg
1980
ctctcctcca gcccggagag ccagcatggc ggcactcagt ctctggggg tgggcagccc
2040
ctgctgcagc ccaccaaggt ggatgcagct gagggtcgtc ggccgcaggc cctgcggctg
2100
attgagcggg acccctatga gcatcctgag aggtgcggc agttgcagca ggagctggag
2160
gcctttcggg gtcagctggg ggatgtggga gctctggaca ctgtctggcg agagctgcaa
2220
gatgcgcagg aacatgatgc ccgaggccgt tccatcgcca ttgccgctg ctactcactg
2280
aagaaccggc accaggatgt catgccctat gacagtaacc gtgtggtgct gcgctcaggc
2340
aaggatgact acatcaatgc cagctgcgtg gaggggctct cccatactg cccccgcta
2400
gtggcaacc aggccccact gcctggcaca gctgctgact tctggctcat ggtccatgag
2460
cagaaagtgt cagtcaattgt catgctgggt tctgaggctg agatggagaa gcaaaaagt
2520
gcacgtact tccccaccga gaggggccag cccatggtgc acggtgccct gagcctggca
2580
ttgagcagcg tccgcagcac cgaaacccat gtggagcgcg tgctgagcct gcagttccga
2640
gaccagagcc tcaagcgtc tcttgtgcac ctgcacttcc ccacttggtc tgagttaggc
2700
ctgcccagca gcccagcaa ccttctgcgc ttcattccag aggtgcacgc acattacctg
2760
catcagcggc cgctgcacac gcccatcatt gtgcactgca gctctggtgt gggccgcagc
2820
ggagcctttg cactgctcta tgcagctgtg caggaggtgg aggtgggaa cggaatccct
2880
gagctgcctc agctggtgcg gcgcatgcgg cagcagagaa agcacatgct gcaggagaag
2940
ctgcacctca ggnctctgct atgaggcagt ggtgagacac gtggagcagg tcctgcagcg
3000
ccatggtgtg cctcctccat gcaaaccctt ggccagtgca agcatcagcc agaagaacca
3060
ccttcctcag gactcccagg acctggteet cgggtgggat gtgcccata gctccatcca
3120
ggccaccatt gccaaagctca gattcggcct cctggggggg tggagtcccc ggttgccagc
3180
ttgccaggcc ctgcagagcc cccaggcctc ccgccagcca gcctcccaga gtctaccca
3240
atcccatctt cctccccacc cccctttcc tccccactac ctgaggctcc ccagcctaag
3300

gggnngccat ctccatcanc ctccaaggct gagctggcag aggtgaggcg agaattgggcc
120
aagtacatgg aagtcctatga gaaggcctcc ttcaccaata gtgagctgca ccgtgccatg
180
aacctgcacg tcggcaacct gcgcctgctc agcgggcccgc ttgaccaggc ccgggctgcc
240
ctgcccacac cggccctctc cccagaggac aaggccgtgc tgcaaaacct aaagcgcac
300
ctggctaagg tgcaggagat gcgggaccag cgcgtgtccc tggagcagca gctgcgtgag
360
cttatccaga aagatgacat cactgcctcg ctggtcacca cagaccactc agagatgaag
420
aagttgttcg aggagcagct gaaaaagtat gaccagctga aggtgtacct ggagcagaac
480
ctggccgccc aggaccgtgt cctctgtgca ctgacagagg ccaacgtgca gtacgcagcc
540
gtgcggcgagg tactcagcga cttggaccaa aagtggaact ccacgtgca gaccctggcg
600
gcctcgtatg aagcctatga ggacctgatg aagaagtcgc aggagggcag ggacttctac
660
gcagatctgg agagcaaggc ggctgctctg ctggagcgca cgcagtccac ctgccaggcc
720
cgcgaggctg cccgccagca gctcctggac agggagctga agaagaagcc gccgccacgg
780
cccacagccc caaagccgct gctgccccgc agggaggaga gtgaggcagt ggaagcagga
840
gacccccctg aggagctgcg cagcctcccc cctgacatgg tggctggccc acgactgcct
900
gacaccttcc tgggaagtgc caccctgctc cactttcctc ccagccccct cccagctcc
960
acaggcccag gacccacta tctctcaggc cccttgcccc ctggtacctc ctcgggcccc
1020
accagctga tacagcccag ggccccaggc ccccatgcaa tgcccgtagc acctgggcct
1080
gcctctacc cagccccctg ctacacaccg gagctgggccc ttgtgccccg atcctcccca
1140
cagcatggcg tggtagcag tccctatgtg ggggtagggc cggccccacc agttgcaggc
1200
ctccccctcg cccacactcc tcaattctca ggccccgagt tggccatggc ggttcggcca
1260
gccaccacca cagtagatag catccaggcg cccatcccca gccacacagc cccacggcca
1320
aacccaccc ctgctcctcc cccgccctgc ttccctgtgc cccacccgca gccactgccc
1380
acgccttaca cctaccctgc aggggctaag caaccatcc cagcacagca ccacttctct
1440
tctgggatcc ccacaggttt tccagcccca aggattgggc cccagcccca gcccctcct
1500
cagccccatc cttcacaagc gtttgggcct cagccccac agcagcccct tccactccag
1560
catccacatc tcttcccacc ccaggcccca ggactcctac cccacaatc cccctacccc
1620
tatccccctc agcctggggc cctggggcag ccgccacccc ccctacacac ccagctctac
1680

catgggttct ctccttcctc tgaacttctt taggagtcac tgcttgtgtg gttcctggga
 1320
 cacttaacca atgccttctg gtactgccat tctttttttt ttttttcaag tattggaagg
 1380
 ggtggggaga tatataaata aatcatgaaa tcaataaaaa aaaaaaaaaa aaaaaaaaaa
 1439

<210> 5654
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 5654
 Met Asp Val Gly Pro Ser Ser Leu Pro His Leu Gly Leu Lys Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Leu Leu Pro Leu Arg Gly Gln Ala Asn Thr Gly Cys
 20 25 30
 Tyr Gly Ile Pro Gly Met Pro Gly Leu Pro Gly Ala Pro Gly Lys Asp
 35 40 45
 Gly Tyr Asp Gly Leu Pro Gly Pro Lys Gly Glu Pro Gly Ile Pro Ala
 50 55 60
 Ile Pro Gly Ile Arg Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Leu
 65 70 75 80
 Pro Gly His Pro Gly Lys Asn Gly Pro Met Gly Pro Pro Gly Met Pro
 85 90 95
 Gly Val Pro Gly Pro Met Gly Ile Pro Gly Glu Pro Gly Glu Glu Gly
 100 105 110
 Arg Tyr Lys Gln Lys Phe Gln Ser Val Phe Thr Val Thr Arg Gln Thr
 115 120 125
 His Gln Pro Pro Ala Pro Asn Ser Leu Ile Arg Phe Asn Ala Val Leu
 130 135 140
 Thr Asn Pro Gln Gly Asp Tyr Asp Thr Ser Thr Gly Lys Phe Thr Cys
 145 150 155 160
 Lys Val Pro Gly Leu Tyr Tyr Phe Val Tyr His Ala Ser His Thr Ala
 165 170 175
 Asn Leu Cys Val Leu Leu Tyr Arg Ser Gly Val Lys Val Val Thr Phe
 180 185 190
 Cys Gly His Thr Ser Lys Thr Asn Gln Val Asn Ser Gly Gly Val Leu
 195 200 205
 Leu Arg Leu Gln Val Gly Glu Glu Val Trp Leu Ala Val Asn Asp Tyr
 210 215 220
 Tyr Asp Met Val Gly Ile Gln Gly Ser Asp Ser Val Phe Ser Gly Phe
 225 230 235 240
 Leu Leu Phe Pro Asp
 245

<210> 5655
 <211> 3810
 <212> DNA
 <213> Homo sapiens

<400> 5655
 gatctgttgg aggaggatga gctgctagag cagaagtttc aggaggcggg gggccaggca
 60

130	135	140
Val Lys Phe Ala Val Arg Glu Arg Tyr Pro Leu Asp His Ala Arg Ala		
145	150	155
Ala Glu Pro		160

<210> 5653

<211> 1439

<212> DNA

<213> Homo sapiens

<400> 5653

```

nnacgcgtcg catcacagcca acctgtgcgt gctgctgtac cgcagcggcg tcaaagtggg
60
caccttctgt ggccacacgt ccaaaaccaa tcagggtcaac tcggggcggg tgctgctgag
120
gttgcagggtg aacttgccag tgctcgtgtc ataatctccc tcggggttgg tgaggaccgc
180
gttgaatctg atcagggtgt tgggtgcagg gggctgggtg gtctgccgag tgaccactca
240
gacaccgtgt cctcttgccct gggagagggg aagcagatct gaggacatct ctgtgccagg
300
ccagaaaccg cccacctgca ggtgaggccc ggacccctgc ccagttcctt ctccgggatg
360
gacgtggggc ccagctccct gccccacctt gggtgaagc tgctgctgct cctgctgctg
420
ctgccccca ggggccaagc caacacaggc tgctacggga tcccagggat gcccggcctg
480
cccggggcac cagggaagga tgggtacgac ggactgccgg ggccaaggg ggagccagga
540
atcccagcca ttcccgggat ccgaggacct aaagggcaga agggagaacc cggcttacct
600
ggccatcctg ggaaaaatgg ccccatggga cccctggga tgccaggggt gcccgggccc
660
atgggcatcc ctggagagcc aggtgaggag ggagataca agcagaaatt ccagtcagt
720
ttcacggtca ctcggcagac ccaccagccc cctgcacca acagcctgat cagattcaac
780
gcggtcctca ccaaccgca gggagattat gacacgagca ctggcaagtt cacctgcaaa
840
gtccccggcc tctactactt tgtctaccac gcgtcgcata cagccaacct gtgctgctg
900
ctgtaccgca gcggcgtaaa agtggtcacc ttctgtggcc acacgtccaa aaccaatcag
960
gtcaactcgg gcggtgtgct gctgaggttg cagggtggcg aggaggtgtg gctggctgtc
1020
aatgactact acgacatggg gggcatccag ggctctgaca gcgtcttctc cggcttctctg
1080
ctcttccccg actagggcgg gcagatgcgc tcgagcccca cgggccttcc acctccctca
1140
gcttctctgca tggaccacc ttactggcca gtctgcatcc ttgcctagac cattctcccc
1200
accagatgga cttctcctcc agggagccca ccctgaccca cccccactgc accccctccc
1260

```

100

<210> 5651
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 5651
 ctcgaggaat attgggtctt ctgcgcggcc gtagagctcc gccaaagtgcg cctgcgcgga
 60
 ggagaagtgg cgtcgagtcc ggccgggcag tagaggaaat tgcggtagtg accctcgggc
 120
 ctcgccatga agagccgctt tagcaccatt gacctccgcg ccgtactcgc ggagctgaat
 180
 gctagcttgc taggaatgag agtaaacaat gtttatgatg tggataataa gacatacctt
 240
 attcgtcttc aaaaaccgga ctttaaagct acacttttac ttgaatctgg catacaaatt
 300
 catacaacag aatttgagtg gcctaagaat atgatgccgt ctagttttgc catgaagtgc
 360
 cgaaaacatt tgaagagtgc gagattagtc agtgcaaac agcttggtgt ggatagaatt
 420
 gtagattttc aatttgaag tgatgaagct gcttaccatt taatcattga gctctatgat
 480
 agggggaaca ttgttcttac agattatgag tacgtaattt taaatattct aaggtttcga
 540
 actgatgagg cagatgatgt taaatttgct gttcgtgaac gctatccact tgatcatgct
 600
 agagctgctg aacct
 615

<210> 5652
 <211> 163
 <212> PRT
 <213> Homo sapiens

<400> 5652
 Met Lys Ser Arg Phe Ser Thr Ile Asp Leu Arg Ala Val Leu Ala Glu
 1 5 10 15
 Leu Asn Ala Ser Leu Leu Gly Met Arg Val Asn Asn Val Tyr Asp Val
 20 25 30
 Asp Asn Lys Thr Tyr Leu Ile Arg Leu Gln Lys Pro Asp Phe Lys Ala
 35 40 45
 Thr Leu Leu Leu Glu Ser Gly Ile Gln Ile His Thr Thr Glu Phe Glu
 50 55 60
 Trp Pro Lys Asn Met Met Pro Ser Ser Phe Ala Met Lys Cys Arg Lys
 65 70 75 80
 His Leu Lys Ser Arg Arg Leu Val Ser Ala Lys Gln Leu Gly Val Asp
 85 90 95
 Arg Ile Val Asp Phe Gln Phe Gly Ser Asp Glu Ala Ala Tyr His Leu
 100 105 110
 Ile Ile Glu Leu Tyr Asp Arg Gly Asn Ile Val Leu Thr Asp Tyr Glu
 115 120 125
 Tyr Val Ile Leu Asn Ile Leu Arg Phe Arg Thr Asp Glu Ala Asp Asp

<210> 5648
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 5648
 Pro Met Gly Pro Gly Thr Leu Ala Phe Pro Gly Gly Pro Met Gly Pro
 1 5 10 15
 Phe Phe Pro Gly Arg Pro Lys Gly Glu Pro Gly Ile Pro Ala Ile Pro
 20 25 30
 Gly Ile Arg Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Leu Pro Gly
 35 40 45
 His Pro
 50

<210> 5649
 <211> 345
 <212> DNA
 <213> Homo sapiens

<400> 5649
 ngggacctgc aagcccgagg ccagacctgc cagcgcgccg gccatggctg tcgccgccgc
 60
 aaccgcctgg tccctcggat cgcgcccagc ccagactcgg actcggacac agactcggag
 120
 gacccgagtc tccggcgag cgcggggcggc ttgctccgct cgcagggtcat ccacagcggc
 180
 cacttcattg tgctcgtgcc gcacagcgac tcgctgcccc ggcggcgcga ccaggagggc
 240
 ccgtggggcc ctccgacttc gggccgcgca gtatcgaccc cacactcaca cgcctcttcg
 300
 agtgcttgag cctggcctac agtggcaagc tgggggtctcc caagt
 345

<210> 5650
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5650
 Met Ala Val Ala Ala Thr Ala Trp Ser Leu Gly Ser Arg Pro Ala
 1 5 10 15
 Gln Thr Arg Thr Arg Thr Gln Thr Arg Arg Thr Arg Val Ser Gly Ala
 20 25 30
 Ala Arg Ala Ala Cys Ser Ala Arg Arg Ser Ser Thr Ala Val Thr Ser
 35 40 45
 Trp Cys Arg Arg Arg Thr Ala Thr Arg Cys Pro Gly Gly Ala Thr Arg
 50 55 60
 Arg Val Arg Gly Ala Leu Arg Leu Arg Ala Ala Gln Tyr Arg Pro His
 65 70 75 80
 Thr His Thr Pro Leu Arg Val Leu Glu Pro Gly Leu Gln Trp Gln Ala
 85 90 95
 Gly Val Ser Gln

```

          100          105          110
Pro Thr Val Asn Arg Ile Thr Pro Lys Thr Gln Gly Thr Asn Gln Ile
          115          120          125
Gln Lys Asn Thr Pro Ser Pro Asp Val Thr Leu Gly Thr Asn Pro Gly
          130          135          140
Thr Glu Asp Ile Gln Phe Pro Ile Gln Lys Ile Pro Leu Gly Leu Asp
145          150          155          160
Leu Lys Asn Leu Arg Leu Pro Arg Arg Lys Met Ser Phe Asp Ile Ile
          165          170          175
Asp Lys Ser Asp Val Phe Ser Arg Phe Gly Ile Glu Ile Ile Lys Trp
          180          185          190
Ala Gly Phe His Thr Ile Lys Leu Asp Tyr
          195          200

```

<210> 5645
 <211> 156
 <212> DNA
 <213> Homo sapiens

```

<400> 5645
ccacgtccat cccgaagaag gaactgcagg tgggcgggttt ttggcctggc acagagatgt
60
cctcagatca gttccccctc tcccaggcaa gaggacacga gcactggcaa gttcacctgc
120
aaagtccccg gcctctacta ctttgtctac cagcgc
156

```

<210> 5646
 <211> 52
 <212> PRT
 <213> Homo sapiens

```

<400> 5646
Pro Arg Pro Ser Arg Arg Arg Asn Cys Arg Trp Ala Val Phe Gly Leu
1      5      10      15
Ala Gln Arg Cys Pro Gln Ile Ser Phe Pro Ser Pro Arg Gln Glu Asp
20     25     30
Thr Ser Thr Gly Lys Phe Thr Cys Lys Val Pro Gly Leu Tyr Tyr Phe
35     40     45
Val Tyr His Ala
50

```

<210> 5647
 <211> 150
 <212> DNA
 <213> Homo sapiens

```

<400> 5647
cccattggggc cgggcaccct ggcattccca ggggggtccca tggggccatt tttcccagga
60
aggcccaagg gggagccagg aatcccagcc attcccggga tccgaggacc caaagggcag
120
aagggagaac ccggcttacc cggccatccn
150

```


cacagcgatg gcagatactc cctcagtga tctgtagctc actctagaga tgccggaaga
 300
 gaaggcctga gaagtgcgt atttccaggg ccttccttca gatcaagcaa cccttccatc
 360
 agtgatgaca gctactttcg caaagaatgt ggccgggac tggaattttc tcactctgat
 420
 tctcgggacc aggtcattgg ccaccggaaa ttggggcatt tccgtttctca ggactggaaa
 480
 tttgcgctcc gtggttcttg ggaacaagac tttggccatc cagttttctca agagtccctt
 540
 tggtcacagg agtatagttt tggtcctctt gcagttttgg gggactttgg atcttccagg
 600
 ctgattgaga aagagtgttt ggagaaggag agtcgggatt atgacgtgga ccatcctggg
 660
 gaggctgact ctgtgcttag gggcagcagt caagtccagg ccagaggctg agctctaaac
 720
 atcgttgacc aggaagggtt cctcctagga aagggggaga ctcagggcct gctcacagct
 780
 aaggggggtg ttgggaaact tgtcacattg agaaatgtga gcacaaaaaa aatacccacc
 840
 gtgaatcgta ttactcccaa aactcagggc actaaccaaa tccagaaaaa cactccaagt
 900
 cctgatgtga ccctggggac aaaccaggg acagaagata tccagttccc cattcagaag
 960
 atccctctgg ggctggatct gaagaatctt cggtcccca gaagaaagat gagctttgac
 1020
 atcatagata agtctgatgt tttttcaaga tttgggatag aaataatcaa atgggcagga
 1080
 ttccacacca taaaattaga ttattaaatt tttcccaaac ttttccagac tctctttgaa
 1140
 cttgaaacag aaacctgtgc taaaatgctt gcctcattca aatgttcctt aaaaccagag
 1200
 cacagagatt tttgcttt
 1218

<210> 5644

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5644

Trp	Glu	Gln	Asp	Phe	Gly	His	Pro	Val	Ser	Gln	Glu	Ser	Ser	Trp	Ser
1				5					10					15	
Gln	Glu	Tyr	Ser	Phe	Gly	Pro	Ser	Ala	Val	Leu	Gly	Asp	Phe	Gly	Ser
			20					25					30		
Ser	Arg	Leu	Ile	Glu	Lys	Glu	Cys	Leu	Glu	Lys	Glu	Ser	Arg	Asp	Tyr
			35				40					45			
Asp	Val	Asp	His	Pro	Gly	Glu	Ala	Asp	Ser	Val	Leu	Arg	Gly	Ser	Ser
			50				55				60				
Gln	Val	Gln	Ala	Arg	Gly	Arg	Ala	Leu	Asn	Ile	Val	Asp	Gln	Glu	Gly
65				70					75					80	
Ser	Leu	Leu	Gly	Lys	Gly	Glu	Thr	Gln	Gly	Leu	Leu	Thr	Ala	Lys	Gly
			85					90						95	
Gly	Val	Gly	Lys	Leu	Val	Thr	Leu	Arg	Asn	Val	Ser	Thr	Lys	Lys	Ile

515 520 525
 Arg His Leu Gly Asp Met Phe Ser Ala Gly Pro Leu
 530 535 540

<210> 5641
 <211> 293
 <212> DNA
 <213> Homo sapiens

<400> 5641
 gcgtcgcata cagccaacct gtgcgtgctg ctgtaccgca gcggcgctcaa agtgggcacc
 60
 ttctgtggcc acgcgtccaa aaccaatcag gtcaactcgg gcgggtgtgct gctgaggttg
 120
 caggtgggcg aggaggtgtg gctggctggg gcaccctgg catccctgga gagccaggtg
 180
 aggagggcag atacaagcag aaattccagt cagtgttcac ggtcactcgg cagaccacc
 240
 agccccctgc acccaacagc ctgatcagat tcaacgcggg cctcaccaac ccg
 293

<210> 5642
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 5642
 Ala Ser His Thr Ala Asn Leu Cys Val Leu Leu Tyr Arg Ser Gly Val
 1 5 10 15
 Lys Val Val Thr Phe Cys Gly His Ala Ser Lys Thr Asn Gln Val Asn
 20 25 30
 Ser Gly Gly Val Leu Leu Arg Leu Gln Val Gly Glu Glu Val Trp Leu
 35 40 45
 Ala Gly Ala Pro Leu Ala Ser Leu Glu Ser Gln Val Arg Arg Ala Asp
 50 55 60
 Thr Ser Arg Asn Ser Ser Gln Cys Ser Arg Ser Leu Gly Arg Pro Thr
 65 70 75 80
 Ser Pro Leu His Pro Thr Ala
 85

<210> 5643
 <211> 1218
 <212> DNA
 <213> Homo sapiens

<400> 5643
 nnacgcgtga ggagcctgag gcggcggcgg ggggtggctcc gcgcgcggtg gtctcggggg
 60
 caaaataaca tggcagccag acgaattaca caggagactt ttgatgctgt attacaagaa
 120
 aaagccaaac gatatcacat ggatgccagt ggtgaggctg taagcgaaac tcttcagttt
 180
 aaagctcaag atctcttaag ggcagtccca agatccagag cagagatgta tgatgacgtc
 240

85 90 95
 Ala Asp Val Ile Leu Leu Val Thr Cys Ser Ile Arg Glu Lys Ala Glu
 100 105 110
 Gln Thr Ile Trp Asn Arg Leu His Gln Leu Lys Ala Leu Lys Thr Arg
 115 120 125
 Arg Pro Arg Ser Arg Val Pro Leu Arg Ile Gly Ile Leu Gly Cys Met
 130 135 140
 Ala Glu Arg Leu Lys Glu Ile Leu Asn Arg Glu Lys Met Val Asp
 145 150 155 160
 Ile Leu Ala Gly Pro Asp Ala Tyr Arg Asp Leu Pro Arg Leu Leu Ala
 165 170 175
 Val Ala Glu Ser Gly Gln Gln Ala Ala Asn Val Leu Leu Ser Leu Asp
 180 185 190
 Glu Thr Tyr Ala Asp Val Met Pro Val Gln Thr Ser Ala Ser Ala Thr
 195 200 205
 Ser Ala Phe Val Ser Ile Met Arg Gly Cys Asp Asn Met Cys Ser Tyr
 210 215 220
 Cys Ile Val Pro Phe Thr Arg Gly Arg Glu Arg Ser Arg Pro Ile Ala
 225 230 235 240
 Ser Ile Leu Glu Glu Val Lys Lys Leu Ser Glu Gln Gly Leu Lys Glu
 245 250 255
 Val Thr Leu Leu Gly Gln Asn Val Asn Ser Phe Arg Asp Asn Ser Glu
 260 265 270
 Val Gln Phe Asn Ser Ala Val Pro Thr Asn Leu Ser Arg Gly Phe Thr
 275 280 285
 Thr Asn Tyr Lys Thr Lys Gln Gly Gly Leu Arg Phe Ala His Leu Leu
 290 295 300
 Asp Gln Val Ser Arg Val Asp Pro Glu Met Arg Ile Arg Phe Thr Ser
 305 310 315 320
 Pro His Pro Lys Asp Phe Pro Asp Glu Val Leu Gln Leu Ile His Glu
 325 330 335
 Arg Asp Asn Ile Cys Lys Gln Ile His Leu Pro Ala Gln Ser Gly Ser
 340 345 350
 Ser Arg Val Leu Glu Ala Met Arg Arg Gly Tyr Ser Arg Glu Ala Tyr
 355 360 365
 Val Glu Leu Val His His Ile Arg Glu Ser Ile Pro Gly Val Ser Leu
 370 375 380
 Ser Ser Asp Phe Ile Ala Gly Phe Cys Gly Glu Thr Glu Glu Asp His
 385 390 395 400
 Val Gln Thr Val Ser Leu Leu Arg Glu Val Gln Tyr Asn Met Gly Phe
 405 410 415
 Leu Phe Ala Tyr Ser Met Arg Gln Lys Thr Arg Ala Tyr His Arg Leu
 420 425 430
 Lys Asp Asp Val Pro Glu Glu Val Lys Leu Arg Arg Leu Glu Glu Leu
 435 440 445
 Ile Thr Ile Phe Arg Glu Glu Ala Thr Lys Ala Asn Gln Thr Ser Val
 450 455 460
 Gly Cys Thr Gln Leu Val Leu Val Glu Gly Leu Ser Lys Arg Ser Ala
 465 470 475 480
 Thr Asp Leu Cys Gly Arg Asn Asp Gly Asn Leu Lys Val Ile Phe Pro
 485 490 495
 Asp Ala Glu Met Glu Asp Val Asn Asn Pro Gly Leu Arg Val Arg Ala
 500 505 510
 Gln Pro Gly Asp Tyr Val Leu Val Lys Ile Thr Xaa Gln Pro Val Leu

tcggagggtcc agttcaacag tgcagtgcct accaatctca gtcgtgggtt taccaccaac
 1440
 tataaaaacca agcaaggagg acttcgtttt gtcattcttc tggatcaggt ctccagagta
 1500
 gatcctgaaa tgaggatccg ttttacctct cccaccccca aggattttcc tgatgaggtt
 1560
 ctgcagctga ttcagagag agataacatc tgtaaacaga tccacctgcc agcccagagt
 1620
 ggaagcagcc gtgtgttga ggccatgcgg aggggatatt caagagaagc ttatgtggag
 1680
 ttagttcacc atattagaga atctattcca ggtgtgagcc tcagcagcga tttcattgct
 1740
 ggctttttgtg gtgagacgga ggaagatcac gtccagacag tctctttgct ccgggaagtt
 1800
 cagtaacaac tgggcttctt ctttgcctac agcatgagac agaagacacg ggcattatcat
 1860
 aggtgaagg atgatgtccc ggaagaggta aaattaaggc gtttggagga actcatcact
 1920
 atcttccgag aagaagcaac aaaagccaat cagacctctg tgggctgtac ccagttggtg
 1980
 ctagtgaag ggctcagtaa acgctctgcc actgacctgt gtggcaggaa tgatggaaac
 2040
 ctttaaggta tcttccctga tgcagagatg gaggatgtca ataaccctgg gctcagggtc
 2100
 agagcccagc ctggggacta tgtgctggtg aagatcacn ntcagccagt tctcagacac
 2160
 ttaggggaca tggtctctgc aggaccactc tgagggactc ttctgcatat tgctgacctg
 2220
 agaggatggc ctgagagctg acttgggcaa tcttcccaa caggaagggg agacattgcc
 2280
 tgccactgag gaaacaggtc atgaagggtg agataagctg caaggggcca agcaacttta
 2340
 tgtcagtga aaacgtgtct ctttaaagct gctatgtgaa cagcttttac agtcattaaa
 2400
 tttacctaaa ctaagggtta aaaaaaaaaa aaa
 2433

<210> 5640

<211> 540

<212> PRT

<213> Homo sapiens

<400> 5640

Met	Cys	Pro	Ser	Pro	Glu	Arg	Gln	Glu	Asp	Gly	Ala	Arg	Lys	Asp	Phe
1				5				10					15		
Ser	Ser	Arg	Leu	Ala	Ala	Gly	Pro	Thr	Phe	Gln	His	Phe	Leu	Lys	Ser
		20					25						30		
Ala	Ser	Ala	Pro	Gln	Glu	Lys	Leu	Ser	Ser	Glu	Val	Glu	Asp	Pro	Pro
		35				40						45			
Pro	Tyr	Leu	Met	Met	Asp	Glu	Leu	Leu	Gly	Arg	Gln	Arg	Lys	Val	Tyr
	50				55					60					
Leu	Glu	Thr	Tyr	Gly	Cys	Gln	Met	Asn	Val	Asn	Asp	Thr	Glu	Ile	Ala
65				70				75					80		
Trp	Ser	Ile	Leu	Gln	Lys	Ser	Gly	Tyr	Leu	Arg	Pro	Val	Thr	Ser	Lys

130

<210> 5639

<211> 2433

<212> DNA

<213> Homo sapiens

<400> 5639

natagctaca aaataaaaaa aactaattca aacaaatgta cttattttaat ccaatatatc
60
ccaacaatta ttgcagcaca taatcaatat aaacattata tatatgaact atttgacact
120
atttgacatt tcttcttcca catccagtgt atctgacatt tagcgcacat ttgatttgca
180
ctcaccact ttgaggagct caattgccgc ttaagtccgt ggctagtggc tgccctaaag
240
ttcagcaccg ccacggagct ttgggtccac ccggactgta aaaaggaagc acttccgtta
300
gcatgaccg gcctgaagta gcggcggaac ggaagtcgct tgtgtatgaa cgcagcggcg
360
gacctgtgag gggatccgac ttgccggcag aacttacgct gcgggacccc gggcactgtt
420
gctgctgcgg gagactgtgg gctgtttagt gccatgcacc ctttacagtg tgcctccaa
480
gtgcagaggt ctctggggtg gggaccattg gcctctgtgt cttggctgtc gctgaggatg
540
tgcagggcac acagcagtct ctctagtacc atgtgtccca gtccagagag gcaggaggat
600
ggagctcgga aggatttcag ctccaggctg gctgctggac cgacttttca acatttttta
660
aaaagtgcct cagctcctca ggagaagctg tcttcagaag tggaagaccc acctccctat
720
ctcatgatgg atgaacttct tggaaggcag agaaaagtct acctcgagac ctatggctgc
780
cagatgaatg tgaatgacac agagatagcc tgggccatct tacagaagag tggctacctg
840
cggccagtaa cctccaaggc agatgtgatt ctcttgtca cgtgctctat cagggagaag
900
gctgagcaga ccatctggaa ccgtttacat cagcttaaag ccttgaagac aaggcggccc
960
cgctcccggg ttctctgag gattggaatt ctaggctgca tggctgagag gttgaaggag
1020
gagatttctc acagagagaa aatggtagat attttggctg gtctctgac ctaccgggac
1080
cttccccggc tgctggctgt tgetgagtcg ggccagcaag ctgccaacgt gctgctctct
1140
ctggacgaga cctatgctga tgcctgcca gtccagacaa gcgccagtgc cacgtctgcc
1200
tttgtgtcaa tcatgagagg ctgtgacaac atgtgtagct actgcattgt tcctttcacc
1260
cggggcaggg agaggagtcg gcctattgcc tccattctag aggaagtga gaagctttct
1320
gagcaggggc tgaaagaagt gacatttctt ggtcagaatg ttaatagttt tcgggacaat
1380

<400> 5637

acgcgtccga ggctcctcaa acccagggcc ccacctggca cgtggaggaa gaagagaagg
 60
 gcaggaggca ggtgccaggg tgggagcccc ctctgtgccc cctgggagtg tccccccgc
 120
 ccagggtactc agggccctgc cctcgtggcc ttgtccgctc gccgcgggtg gggctggcac
 180
 aaggcccggt ttggaggaag tggaggctcc caggagaaag gcagtggctg tgatcgaca
 240
 gcccaggctc tgccctgcac tgccctggac cagaggctg cccaccccag acagggtggga
 300
 cccctttccc gcatgcagac tctgagcagc agcttctgt gacccccacc gcgtcctgct
 360
 cctcaggctc atgccctgcg ggaacagaag ccaagaccg gtagaaaatc caagggtgtt
 420
 aaatataaat aagagcgatt cccacagccc cagggtgctg gccagcctca cagggtgccg
 480
 ctggttctgt gacccatccc aggcacacgc tcccctggct gggcgccctg ccagggtccc
 540
 cctgtggctg gcgtgtggag acacgtgggc cttctccac gtgccacga gggcgttagc
 600
 aggtccaag gagggccagc cccggccagc ctgtgtggac cccgcgggcc tgcgcgcccc
 660
 ggagctgctg actgtgtcag agccggctg cccagcggcc cggcgccctc cctccagctg
 720
 cccagcctgg gatccgtccg ctgtctgtct cctgaaccag ggagtctgac ccactcacag
 780
 ctcccatggg gtccgtgcag ccaaggcccc gcagccacac tcaact
 825

<210> 5638

<211> 132

<212> PRT

<213> Homo sapiens

<400> 5638

Met Pro Cys Gly Asn Arg Ser Gln Asp Pro Val Glu Asn Pro Arg Cys
 1 5 10 15
 Leu Asn Ile Asn Lys Ser Asp Ser His Ser Pro Thr Val Leu Ala Ser
 20 25 30
 Leu Thr Gly Ala Arg Trp Phe Cys Asp Pro Ser Gln Ala His Ala Pro
 35 40 45
 Leu Ala Gly Arg Leu Ala Arg Ala Pro Leu Trp Leu Ala Cys Gly Asp
 50 55 60
 Thr Trp Ala Leu Leu His Val Pro Thr Arg Ala Val Ala Gly Ser Lys
 65 70 75 80
 Glu Ala Gln Pro Arg Pro Ala Cys Val Asp Pro Ala Gly Leu Arg Ala
 85 90 95
 Pro Glu Leu Leu Thr Val Ser Glu Pro Gly Cys Pro Ala Pro Arg Arg
 100 105 110
 Pro Pro Ser Ser Cys Pro Ala Trp Asp Pro Ser Ala Val Cys Leu Leu
 115 120 125
 Asn Gln Gly Val

aaagaatctc ttgatccaaa tacatcttat ggggagccct accagcacia tactccatta
 240
 cattatgctg ctagacatgg aatgaataaa atattaggag atgatttcag aagagcagat
 300
 tgtctgcaga tgatcttaaa atggaaagga gcaaaacttg accagggtga atatgagaga
 360
 gcagctattg atgctgttga taacaaaaaa aacacaccct tgcactatgc tgctgcctca
 420
 gggatgaaag cctgtgtaga aaaacatgga ggagacttgt ttgctgagaa tgaaaataaa
 480
 gatactcctt gtgattgtgc tgaaaagcaa caccacaaag atttggccct caatctggaa
 540
 tctcaaattg tattctcacg ggatcccag gctgaagaaa tagaagctga atatgctgca
 600
 ttagacaaac gaga
 614

<210> 5636

<211> 204

<212> PRT

<213> Homo sapiens

<400> 5636

Xaa	Val	Lys	Asp	Val	Ala	Glu	Val	Phe	Gln	Lys	Trp	Leu	Lys	Ile	Glu	1	5	10	15
Gly	Lys	Lys	Cys	His	Cys	Leu	Ser	Glu	Lys	Thr	Lys	Gln	Asn	Met	Gly	20	25	30	
Asn	Thr	Thr	Thr	Lys	Phe	Arg	Lys	Ala	Leu	Ile	Asn	Gly	Asp	Glu	Asn	35	40	45	
Leu	Ala	Cys	Gln	Ile	Tyr	Glu	Asn	Asn	Pro	Gln	Leu	Lys	Glu	Ser	Leu	50	55	60	
Asp	Pro	Asn	Thr	Ser	Tyr	Gly	Glu	Pro	Tyr	Gln	His	Asn	Thr	Pro	Leu	65	70	75	80
His	Tyr	Ala	Ala	Arg	His	Gly	Met	Asn	Lys	Ile	Leu	Gly	Asp	Asp	Phe	85	90	95	
Arg	Arg	Ala	Asp	Cys	Leu	Gln	Met	Ile	Leu	Lys	Trp	Lys	Gly	Ala	Lys	100	105	110	
Leu	Asp	Gln	Gly	Glu	Tyr	Glu	Arg	Ala	Ala	Ile	Asp	Ala	Val	Asp	Asn	115	120	125	
Lys	Lys	Asn	Thr	Pro	Leu	His	Tyr	Ala	Ala	Ala	Ser	Gly	Met	Lys	Ala	130	135	140	
Cys	Val	Glu	Lys	His	Gly	Gly	Asp	Leu	Phe	Ala	Glu	Asn	Glu	Asn	Lys	145	150	155	160
Asp	Thr	Pro	Cys	Asp	Cys	Ala	Glu	Lys	Gln	His	His	Lys	Asp	Leu	Ala	165	170	175	
Leu	Asn	Leu	Glu	Ser	Gln	Met	Val	Phe	Ser	Arg	Asp	Pro	Glu	Ala	Glu	180	185	190	
Glu	Ile	Glu	Ala	Glu	Tyr	Ala	Ala	Leu	Asp	Lys	Arg					195	200		

<210> 5637

<211> 825

<212> DNA

<213> Homo sapiens

<213> Homo sapiens

<400> 5634

```

Pro Thr Ala Ser Pro Ser Ser Trp Gln Ser Val Leu Arg Ala Trp Thr
 1           5           10           15
Leu Thr Val Arg Ser Leu Leu Asp Thr Arg Glu His Cys Leu Asn Glu
      20           25           30
Phe Asn Phe Pro Asp Pro Tyr Ser Lys Val Lys Gln Arg Glu Asn Gly
      35           40           45
Val Ala Leu Arg Cys Phe Pro Gly Val Val Arg Ser Leu Asp Ala Leu
      50           55           60
Gly Trp Glu Glu Arg Gln Leu Ala Leu Val Lys Gly Leu Leu Ala Gly
65           70           75           80
Asn Val Phe Asp Trp Gly Ala Lys Ala Val Ser Ala Val Leu Glu Ser
      85           90           95
Asp Pro Tyr Phe Gly Phe Glu Glu Ala Lys Arg Lys Leu Gln Glu Arg
      100          105          110
Pro Trp Leu Val Asp Ser Tyr Ser Glu Trp Leu Gln Arg Leu Lys Gly
      115          120          125
Pro Pro His Lys Cys Ala Leu Ile Phe Ala Asp Asn Ser Gly Ile Asp
      130          135          140
Ile Ile Leu Gly Val Phe Pro Phe Val Arg Glu Leu Leu Leu Arg Gly
145          150          155          160
Thr Glu Val Ile Leu Ala Cys Asn Ser Gly Pro Ala Leu Asn Asp Val
      165          170          175
Thr His Ser Glu Ser Leu Ile Val Ala Glu Arg Ile Ala Gly Met Asp
      180          185          190
Pro Val Val His Ser Ala Leu Gln Glu Glu Arg Leu Leu Leu Val Gln
      195          200          205
Thr Gly Ser Ser Ser Pro Cys Leu Asp Leu Ser Arg Leu Asp Lys Gly
      210          215          220
Leu Ala Ala Leu Val Arg Glu Arg Gly Ala Asp Leu Val Val Ile Glu
225          230          235          240
Gly Met Gly Arg Ala Val His Thr Asn Tyr His Ala Ala Leu Arg Cys
      245          250          255
Glu Ser Leu Lys Leu Ala Val Ile Lys Asn Ala Trp Leu Ala Glu Arg
      260          265          270
Leu Gly Gly Arg Leu Phe Ser Val Ile Phe Lys Tyr Glu Val Pro Ala
      275          280          285
Glu

```

<210> 5635

<211> 614

<212> DNA

<213> Homo sapiens

<400> 5635

```

nntgtgaaag atgttcgaga agtgttcag aagtggtga agatagaagg aaaaaagtgc
60
cactgcctat cagaaaaaac aaaacaaaac atgggaaata caaccaccaa attccgtaaa
120
gcactcatca atggtgatga aaacctggcc tgccaaatat atgaaaacaa tcctcagcta
180

```


cggtctttca gcgccatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc
780
ggactcttct gcttgtcact tgtccgagtg gcttcagaga ttaaaggggc cccctcataa
840
atgtgcctta attttcgcag ataacagggg gaatagacat ctttttgga gtcttccct
900
ttgtcaggga gctactcctt agagggacag aggtcatcct ggcgtgcaac tcaggccccg
960
ccctgaacga cgtgaccac agcgagtccc tcatcgtggc agagcgtatt gcgggcatgg
1020
accctgaccg tgcgcagcct gctggacacc agggagcact gtctgaacga gttcaacttc
1080
ccggtacccct actccaaagt gaagcagcgg gagaatggcg tggcgctgag gtgcttcccc
1140
ggggtcgtgc gctccctgga cgcgctgggc tgggaggaac ggcagctggc gctggtgaaa
1200
ggcctcctgg cggggaatgt cttcgactgg ggggccaaag ccgtgtctgc tgccttgaa
1260
tccgaccct actttgggtt tgaagaagca aagaggaagt tacaagaaag accctggctc
1320
gtggattcct acagcgagtg gcttcagaga ttaaaggggc cccctcataa atgtgcctta
1380
attttcgcag ataacagtgg aatagacatc attttgggag tcttccctt tgtcaggag
1440
ctactcctta gagggacaga ggtcatcctg gcgtgcaact caggccccgc cctgaacgac
1500
gtgaccacaca gcgagtcctt catcgtggca gagcgtattg cgggcatgga ccctgtcgtg
1560
cactctgcgc tccaggaaga gaggtgctg ctggtgcaga cgggctccag ctccccgtgc
1620
ctcgacctca gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgcgat
1680
ctggtggtca tcgagggcat gggccgtgct gtccacacaa actaccacgc agccctgcgc
1740
tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggccgagcg gctgggaggc
1800
cggtctttca gcgtcatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc
1860
ggactcttct gcttgtcact tgtcaggaat gtgtttttac caccacaggg aaactgcgtt
1920
caaatcaacg ttttatatg gtactgctgt gacgcggcac atacaccca gccgcacaga
1980
tgcgtgtgac ccagaggcga gacgcagctt tgcctggga gacgttcata ttggaatcta
2040
tttaactgct aaagaacctt ttatatatat atatatatat aaatagagag atctatacag
2100
gtatgtctga cgggacgcag caccgtgggc acgcacaaa tagagttttt aaaagaggaa
2160
aaaaaactct atttggtgcg t
2181

<210> 5634

<211> 289

<212> PRT

```

      1           5           10           15
Ala Gly Ala Gly Ala Gly His Leu Thr Pro Gln Ala Ser Pro Thr Ser
      20           25           30
Glu Leu Pro Thr Ala Lys Thr Pro Gly Glu Ala Gly Arg Gly Gly Val
      35           40           45
Arg Gly Lys Glu Gly Leu Cys Glu Ser Lys Pro His Pro Gln Ser Arg
      50           55           60
Ala Glu Thr Gln Val Cys Lys Ser His Pro Pro Pro Thr Ser Ser Ser
      65           70           75           80
Phe Glu Ala Ser Ser Thr Arg Gly Arg Ala Gly Ala Ala Gln Arg Pro
      85           90           95
Glu Lys Gly Lys Pro His Arg Arg Lys Leu Lys Ala Ser Val Pro Cys
      100          105          110
Val Ser Ala Glu Arg Val Asn Gly Pro Lys Gly Ser Ser Leu Gln Thr
      115          120          125
Ala Arg Ile His Pro Thr Gly Gly His Arg Thr Arg Pro Gly Pro Ser
      130          135          140
Ala Ser Val Pro Val Gln Pro Thr Pro Val Gln Pro Gly Ala Leu Ser
      145          150          155          160
Asp Leu Thr Thr Arg Val Pro Ser Thr Cys Val His Thr Gln Met Gln
      165          170          175
Glu Arg Thr His Thr Thr Val
      180

```

<210> 5633

<211> 2181

<212> DNA

<213> Homo sapiens

<400> 5633

```

gccaatgtcc ctgtggccac tcagctgaga ccgagggcga cctgggcagc tgcgggtgtc
60
tgtcacctcc gtgtcccaca tagatgccag gctctgcttc tgtggttctg gaggtcatta
120
gtcaattgta tgtggtgctg tctgtctctc tgattgcaga ggaggaagga accccttaaa
180
tgagcggggt ctgagtgctg gggccgctgg tctgctctgc ctggtgggat tctccagtgc
240
tggtttcatc tgtgccccag cccactctc accaacaagg agggcgtgaa aatgacaagg
300
aatccatccc tagagttcac aggagatcta gggcagagtt tccaagctgc agctgctctg
360
gccctgtgtg agctgctgct ctgaggaagc ccagggctga ggtagctacc aggcggaggc
420
tggttttgga ggcctccaca tcagggaatt gagcggtagg gggttcagcc ttcacgttgg
480
tcgccgcact gtatgggaag tggggtctgg ggtctgcttg ccagctctca ccgtctctt
540
cctccccaaa gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgcggat
600
ctgggtgtca tcgagggcat gggcctgct gtccacacaa actaccacgc agccctgcgc
660
tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggcggagcg gctgggcggc
720

```

```
<210> 5631
<211> 783
<212> DNA
<213> Homo sapiens
```

```
<210> 5632
<211> 183
<212> PRT
<213> Homo sapiens
```

4812

130		135		140											
Pro	Gly	Ala	Gly	His	Cys	Gln	Glu	Leu	Val	Leu	Thr	Glu	Asp	Glu	Lys
145					150					155					160
Lys	Leu	Leu	Ala	Lys	Glu	Gly	Ile	Thr	Leu	Pro	Thr	Gln	Leu	Pro	Leu
			165						170						175
Thr	Lys	Tyr	Glu	Arg	Val	Leu	Lys	Lys	Ile	Arg	Arg	Lys	Ile	Arg	
			180					185					190		
Asn	Lys	Gln	Ser	Ala	Gln	Glu	Ser	Arg	Lys	Lys	Lys	Lys	Glu	Tyr	Ile
		195					200					205			
Asp	Gly	Leu	Glu	Thr	Arg	Ser	Cys	Cys	Cys	Pro	Leu	Pro	Ser	Ser	Ser
	210				215					220					
Ser	Pro	Pro	Ser	Ala	Leu	Leu	Ala	Pro	Thr	Lys	Pro	Arg	Ala	Leu	Gly
225					230					235					240
Thr	Leu	Arg	Leu	Tyr	Glu	Cys	Ser	Pro	Glu	Leu	Cys	Thr	Thr	Met	Leu
			245						250					255	
Pro	Pro	Ala	Trp	Leu	Leu	Met	Leu	Cys	Gln	Ala	Pro	Arg	Pro	Gln	Asp
		260					265					270			
Pro	Asp	Pro	Arg	Leu	Thr	Gln	Pro	Glu	Lys	Ser	Leu	Gln	Glu	Ala	Pro
	275					280						285			
Gly	Gln	Thr	Gly	Ala	Ser	Arg	Thr	Pro	Arg	Thr					
	290					295									

<210> 5629

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5629

gtgcacgacc ccaactgaatc atcccacaac catggatggg agacacactc agtctccttt
60

aacagaagat aaagctgggg cttacagaga atgtacaact tggcccaggg cacaccagtt
120

agccatcagg ggcagngctg ctattcaggt ctgggactgt gggactccag agcccatggt
180

ttttacgagg atgccatact gccacaatgg atggtgtctt tatctcctga tatatgattg
240

tgtgttggga ggcgtggggg ggcagctgga agaattggaga ggcatatttg tggaggatct
300

tccccattc tctgtacctc tctcttggag ctcccagttc catctgagaa attatctact
360

ctgagaaatc gtcacaacac agcatgggtg tgagtgcagt ggcagaagcc tgtgcctggt
420

tgtatggg

428

<210> 5630

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5630

Met Asp Gly Arg His Thr Gln Ser Pro Leu Thr Glu Asp Lys Ala Gly

1

5

10

15

Ala Tyr Arg Glu Cys Thr Thr Trp Pro Arg Ala His Gln Leu Ala Ile

ctctcctatc atcctggcaa ctcttgctcc accacaaccc cagggccagt gatccaacaa
 600
 cagcatcacc tgggggcttc ctacctctcg cgacctgggg ctgggcactg tcaggagctg
 660
 gtgctcaccg aggatgagaa gaagctgctg gctaaagaag gcatcacctt gccactcag
 720
 ctgccccctca ctaagtacga ggagcgagtg ctgaaaaaaa tccgccggaa aatccggaac
 780
 aagcagtcgg cgcaagaaag caggaagaag aagaaggaat atatcgatgg cctggagact
 840
 cggtcctggt gctgtccttt gccctcatca tcctccccct catcagccct ttggcccca
 900
 aaaaaaccga gagccctggg gactttgcgc ctgtacgagt gttctccaga actttgcaca
 960
 acgatgctgc ctcccgcgtg gctgctgatg ctgtgccagg ctccgaggcc ccaggacccc
 1020
 gacccgaggc tgacacaacc cgagaagagt ctccaggaag ccccggggca gactggggct
 1080
 tccaggacac cgcgaacctg accaattcga cggaggagct ggacaacgcc accctggctc
 1140
 tgaggaaatgc aacagagggg ctgggccagg tcgccctgct ggactgggtg gcgcctgggc
 1200
 cgagcactgg ctcaggacgt gcagggctgg aggcggcggg agacgagctg tgagccccac
 1260
 caggactatg ctcccaggcc cctctgcccc ggggtgcctt ggggatgctg cactgggcag
 1320
 ctaccacctt ggggatggga cgtgaggcca agaccccagc agagatgcca gaatggggga
 1380
 ggcacagctc atagccacac a
 1401

<210> 5628

<211> 299

<212> PRT

<213> Homo sapiens

<400> 5628

Met	Ala	Ser	Ala	Cys	Ser	Met	Asp	Pro	Ile	Asp	Ser	Phe	Glu	Leu
1			5				10					15		
Leu	Asp	Leu	Leu	Phe	Asp	Arg	Gln	Asp	Gly	Ile	Leu	Arg	His	Val
		20					25				30			
Leu	Gly	Glu	Gly	Trp	Gly	His	Val	Lys	Asp	Gln	Val	Leu	Pro	Asn
	35					40				45				
Asp	Ser	Asp	Asp	Phe	Leu	Ser	Ser	Ile	Leu	Gly	Ser	Gly	Asp	Ser
	50				55					60				
Pro	Ser	Ser	Pro	Leu	Trp	Ser	Pro	Glu	Gly	Ser	Asp	Ser	Gly	Ile
65			70					75					80	
Glu	Asp	Leu	Pro	Ser	Asp	Pro	Gln	Asp	Thr	Pro	Pro	Arg	Ser	Gly
		85					90					95		
Ala	Thr	Ser	Pro	Ala	Gly	Cys	His	Pro	Ala	Gln	Pro	Gly	Lys	Gly
	100						105					110		
Cys	Leu	Ser	Tyr	His	Pro	Gly	Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro
	115					120					125			
Pro	Val	Ile	Gln	Gln	Gln	His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu
														Arg

115	120	125
Gln Leu Ala Gln Leu His Thr Leu Glu Lys Asp Leu Val Ser Ala Cys		
130	135	140
Asp Leu Leu Gly Val Gly Ala Glu Tyr Ala Arg Val Val Gly Ser Glu		
145	150	155
Tyr Thr Arg Ala Leu Phe Leu Leu Ser Lys Gly Met Leu Leu Leu Met		
165	170	175
Glu Arg Lys Leu Gln Glu Val His Pro Leu Leu Thr Leu Cys Gly Gln		
180	185	190
Ile Val Glu Asn Trp Gln Gly Asn Pro Ile Gln Lys Glu Ser Leu Arg		
195	200	205
Val Phe Phe Leu Val Leu Gln Val Thr His Tyr Leu Asp Ala Gly Gln		
210	215	220
Val Lys Ser Val Lys Pro Cys Leu Lys Gln Leu Gln Gln Cys Ile Gln		
225	230	235
Thr Ile Ser Thr Leu His Asp Asp Glu Ile Leu Pro Ser Asn Pro Ala		
245	250	255
Asp Leu Phe His Trp Leu Pro Lys Glu His Met Cys Val Leu Val Tyr		
260	265	270
Leu Val Thr Val Met His Ser Met Gln Ala Gly Tyr Leu Glu Lys Ala		
275	280	285
Gln Lys Tyr Thr Asp Lys Ala Leu Met Gln Leu Glu Lys Leu Lys Met		
290	295	300
Leu Asp Cys Ser Pro Ile Leu Ser Ser Phe Gln Val Ile Leu Leu Glu		
305	310	315
His Ile Ile Met Cys Arg Leu Val Thr Gly His Lys Ala Thr Ala Leu		
325	330	335
Gln Glu Ile		

<210> 5627

<211> 1401

<212> DNA

<213> Homo sapiens

<400> 5627

nctctcacac tgtggaattc tctctatcag cctcaaagtc cagatttgga aagggagtct
60

cagcgagggg cagcagctgg cccaacccgg aggcagagcg gcaactgaac tctagccgga
120

aagagccagg gttatgtgca catgggaggt ggggaggaca ggggctgtat gtgaccctca
180

catctgttcc tcgcgccccca gatggcttct gctgectgct ccatggaccc catcgacagc
240

tttgagctcc tggatctcct gtttgaccgg caggacggca tcttgagaca cgtggagctg
300

ggcgagggct ggggtcacgt caaggaccag gtcctgccaa accccgactc tgacgacttc
360

ctcagctcca tcctgggctc tggagactca ctgccagct cccactctg gtccccgaa
420

ggcagtgata gtggcatctc cgaagacctc ccctccgacc cccaggacac ccctccacgc
480

agcggaccag ccacctcccc cgccggctgc catcctgcc agcctggcaa ggggcctgc
540

cccaaaatcc gcctgtgcgt gcaactgcctg caggccgtgt tccccttcaa gccgcccag
 120
 cgcacgagg cccgtacaca cctgcagctg ggctccgttc tctatcacca caccaagaac
 180
 agcgagcagg cgcgcagcca cctggagaag gcgtgggtga tatcacagca aatcccacag
 240
 ttccaagatg ttaaatttga agcagcaagt ctgttgtctg aattgtactg tcaagagaat
 300
 tccgttgatg cagcaaagcc gctgctgcgg aaggcgatcc agatctcaca gcagacccca
 360
 tattggcact gccgcctgct cttccagctc gctcaactgc acacgcttga gaaggacctg
 420
 gtgtcggcct gtgacctcct gggtgtaggg gccgagtacg cccgggtggt gggatctgaa
 480
 tacacacggg cgctgttctt cctcagcaag gggatgctgc tgctgatgga gcgaaagctg
 540
 caggaggtgc acccgctgct gacctctctg gggcagatcg tggagaactg gcaggggaac
 600
 cccatccaga aggagtcgct gcgtgtcttc ttcttggtgc tccaggtcac ccactatctg
 660
 gatgccgggc aggtgaagag cgtgaagccg tgtctgaagc agctgcagca gtgcatccag
 720
 accatctcca cactgcacga tgatgagatc ctgccagca accccgctga cctcttccac
 780
 tggctgcccagaggagcacat gtgtgtgctt gtctacctgg tgactgtgat gcactccatg
 840
 caggccggct acctggagaa ggcgcagaag tacacggaca aggcctcat gcagctggag
 900
 aagctcaaga tgctggactg cagccccatc ctgtcatcct tccaagtgat cctgctggag
 960
 cacatcatca tgtgccgctt tgtcacgggt cacaaggcca cggcgctgca ggagatc
 1017

<210> 5626

<211> 339

<212> PRT

<213> Homo sapiens

<400> 5626

Ala	Asp	Ser	Trp	Tyr	Leu	Ala	Leu	Leu	Gly	Phe	Ala	Glu	His	Phe	Arg
1				5					10					15	
Thr	Ser	Ser	Pro	Pro	Lys	Ile	Arg	Leu	Cys	Val	His	Cys	Leu	Gln	Ala
			20					25					30		
Val	Phe	Pro	Phe	Lys	Pro	Pro	Gln	Arg	Ile	Glu	Ala	Arg	Thr	His	Leu
			35				40					45			
Gln	Leu	Gly	Ser	Val	Leu	Tyr	His	His	Thr	Lys	Asn	Ser	Glu	Gln	Ala
			50			55					60				
Arg	Ser	His	Leu	Glu	Lys	Ala	Trp	Leu	Ile	Ser	Gln	Gln	Ile	Pro	Gln
					70				75					80	
Phe	Glu	Asp	Val	Lys	Phe	Glu	Ala	Ala	Ser	Leu	Leu	Ser	Glu	Leu	Tyr
				85				90					95		
Cys	Gln	Glu	Asn	Ser	Val	Asp	Ala	Ala	Lys	Pro	Leu	Leu	Arg	Lys	Ala
			100					105					110		
Ile	Gln	Ile	Ser	Gln	Gln	Thr	Pro	Tyr	Trp	His	Cys	Arg	Leu	Leu	Phe

```

          35          40          45
Leu Ser Ala Arg Leu Ala Ser Ile Ser Arg Arg Arg Ser Ser Arg Phe
          50          55          60
Phe Arg Ala Ser Ser Ala Leu Thr Cys Pro Gly Cys Trp Asp Val Gln
65          70          75          80
Thr Gly

```

<210> 5623
 <211> 357
 <212> DNA
 <213> Homo sapiens

```

<400> 5623
nctggaagaa ctcgtcatgc tctttgtagc gtggtgcttc tgttgctcac aggacaactt
60
gcctttgatg attttcaaga gagttgtgct atgatgtggc aaaagtatgc aggaagcagg
120
cggcfaatgc ctctgggagc aaggatcctt ttccacggtg tgttctatgc cgggggcttt
180
gccattgtgt attacctcat tcaaaagttt cattccaggg ctttatatta caagttggca
240
gtggagcagc tgcagagcca tcccgaggca caggaagctc tgggccctcc tctcaacatc
300
cattatctca agctcatcga cagggaaaac ttcgtggaca ttgttgatgc caagttg
357

```

<210> 5624
 <211> 88
 <212> PRT
 <213> Homo sapiens

```

<400> 5624
Met Trp Gln Lys Tyr Ala Gly Ser Arg Arg Ser Met Pro Leu Gly Ala
1          5          10          15
Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly Gly Phe Ala Ile Val
          20          25          30
Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Ala Leu Tyr Tyr Lys Leu
          35          40          45
Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly
          50          55          60
Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe
65          70          75          80
Val Asp Ile Val Asp Ala Lys Leu
          85

```

<210> 5625
 <211> 1017
 <212> DNA
 <213> Homo sapiens

```

<400> 5625
gccgactcgt ggtacctggc gcttctgggc ttcgctgagc acttccgcac ttccagcccg
60

```



```
<210> 5621
<211> 456
<212> DNA
<213> Homo sapiens
```

```
<210> 5622
<211> 82
<212> PRT
<213> Homo sapiens
```

4806

agaaccccaa cacagtgatt gtgccgacgt cgtccagtgg gcagcaccgc caacgacctg
 600
 ccttgggcgg ggccggcacg ctggagggcg tggaggcgtc gctgttctac cagtgtctgg
 660
 aaaacctgtg tgatcggcac aagtacagct gcccaccccc agcacttgtc aaagaggccc
 720
 tcagcaatgt tcagagactg accttctatg gattcctcat ggctctctca aagcaccgtg
 780
 gaatcaacca agccctcggg aagtcagagc taagcagccg tcagcctctc ctgccgcaca
 840
 acacagggag cagctggcct ctgttagcaa cacggctcca gaggggaagg ggcacacca
 900
 tctctgcctt gacttcccag ggccggactc aatcccaggg agcaggaata tggcgacaaa
 960
 acatggctct tacacattcc catggtaggg gacagccctc cctgcctgca gccctgcccc
 1020
 aacatgaaac cacctcccca tagcagaagc gccagcccc tcctcagaga accccagctc
 1080
 tgctttgggg agcagcctgc aggtcgggca gacacaggac tatttactca gtgacgctag
 1140
 agattatata tcagagagac ctgaatccca ttataaaca aggcaaaggt gtgtctgcgg
 1200
 agaccttttt tccaagctg
 1219

<210> 5620

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5620

Met	Leu	Ser	Pro	Glu	Arg	Leu	Ala	Leu	Pro	Asp	Tyr	Glu	Tyr	Leu	Ala
1				5				10						15	
Gln	Arg	His	Val	Leu	Thr	Tyr	Met	Glu	Asp	Ala	Val	Cys	Gln	Leu	Leu
			20					25				30			
Glu	Asn	Arg	Glu	Asp	Ile	Ser	Gln	Tyr	Gly	Ile	Ala	Arg	Phe	Phe	Thr
	35						40					45			
Glu	Tyr	Phe	Asn	Ser	Val	Cys	Gln	Gly	Thr	His	Ile	Leu	Phe	Arg	Glu
	50					55				60					
Phe	Ser	Phe	Val	Gln	Ala	Thr	Pro	His	Asn	Arg	Val	Ser	Phe	Leu	Arg
65					70				75					80	
Ala	Phe	Trp	Arg	Cys	Phe	Arg	Thr	Val	Gly	Lys	Asn	Gly	Asp	Leu	Leu
			85					90					95		
Thr	Met	Lys	Glu	Tyr	His	Cys	Leu	Leu	Gln	Leu	Leu	Cys	Pro	Asp	Phe
			100					105					110		
Pro	Leu	Glu	Leu	Thr	Gln	Lys	Ala	Ala	Arg	Ile	Val	Leu	Met	Asp	Asp
		115					120					125			
Ala	Met	Asp	Cys	Leu	Met	Ser	Phe	Ser	Asp	Phe	Leu	Phe	Ala	Phe	Gln
	130						135				140				
Ile	Gln	Phe	Tyr	Tyr	Ser	Glu	Phe	Leu	Asp	Ser	Val	Ala	Ala	Ile	Tyr
145					150				155					160	
Glu	Asp	Leu	Leu	Ser	Gly	Lys	Asn	Pro	Asn	Thr	Val	Ile	Val	Pro	Thr
			165					170						175	
Ser	Ser	Ser	Gly	Gln	His	Arg	Gln	Arg	Pro	Ala	Leu	Gly	Gly	Ala	Gly

770		775		780
Trp Val Glu Ser Glu Cys Pro Glu Lys Glu Lys Leu Pro Gln Glu Trp				
785		790		800
Lys Lys Lys Ser Leu Ile Gln Lys Leu Ile Leu Leu Arg Ala Met Arg				
	805		810	815
Pro Asp Arg Met Thr Tyr Ala Leu Arg Asn Phe Val Glu Glu Lys Leu				
	820		825	830
Gly Ala Lys Tyr Val Glu Arg Thr Arg Leu Asp Leu Val Lys Ala Phe				
	835		840	845
Glu Glu Ser Ser Pro Ala Thr Pro Ile Phe Phe Ile Leu Ser Pro Gly				
	850		855	860
Val Asp Ala Leu Lys Asp Leu Glu Ile Leu Gly Lys Arg Leu Gly Phe				
865		870		880
Thr Ile Asp Ser Gly Lys Phe His Asn Val Ser Leu Gly Gln Gly Gln				
	885		890	895
Glu Thr Val Ala Glu Val Ala Leu Glu Lys Ala Ser Lys Gly Gly His				
	900		905	910
Trp Val Ile Leu Gln Asn Val His Leu Val Ala Lys Trp Leu Gly Thr				
	915		920	925
Leu Glu Lys Leu Leu Glu Arg Phe Ser Gln Gly Ser His Arg Asp Tyr				
	930		935	940
Arg Val Phe Met Ser Ala Glu Ser Ala Pro Thr Pro Asp Glu His Ile				
945		950		960
Ile Pro Gln Gly Leu Leu Glu Asn Ser Ile Lys Ile Thr Asn Glu Pro				
	965		970	975
Pro Thr Gly Met Leu Ala Asn Leu His Ala Ala Leu Tyr Asn Phe Asp				
	980		985	990
Gln Val Arg Lys Arg Ser Arg Leu Gly Arg Gln				
	995		1000	

<210> 5619

<211> 1219

<212> DNA

<213> Homo sapiens

<400> 5619

```

aagccggaga gctggagctt tgaagccacc ccggtcaaag gatgctgagt ccggagcgcc
60
tagccctacc ggactacgag tatctggctc agcgacatgt cctcacctac atggaggatg
120
cagtgtgccca gctgctagaa aacagggaag atattagcca atatggaatt gccaggttct
180
tcactgaata ttttaacagt gtatgccagg gaacacacat tctctttcga gaattcagct
240
tcgtccaagc cccccccac aatagggat cttttttacg ggcttctg agatgcttcc
300
gaactgtggg caaaaatggc gatttgctga ccatgaaaga atatcactgt ttgctgcaat
360
tactgtgtcc tgatttcccg ctggagctca ctcagaaagc agccaggatt gtgctcatgg
420
acgatgccat ggactgcttg atgtcttttt cagatttctt ctttgcttcc cagatccagt
480
tttactactc agaattcctg gacagtgtgg ctgccatcta tgaggacctg ctgtcaggca
540

```

4803

gatttcaatg accagtaa atatttcagt ctcaccctaa cattaagaaa acttcagcta
 3420
 ctgtgtaggg aaagctaact aggtaacttc ttgaggaggt tgcttttttt tttttttttt
 3480

<210> 5618

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 5618

His	Lys	Asp	Ser	Ile	Ser	Leu	Phe	Met	Ala	His	Val	His	Thr	Thr	Val
1			5						10					15	
Asn	Glu	Met	Ser	Thr	Arg	Tyr	Tyr	Gln	Asn	Glu	Arg	Arg	His	Asn	Tyr
		20						25					30		
Thr	Thr	Pro	Lys	Ser	Phe	Leu	Glu	Gln	Ile	Ser	Leu	Phe	Lys	Asn	Leu
		35					40					45			
Leu	Lys	Lys	Lys	Gln	Asn	Glu	Val	Ser	Glu	Lys	Lys	Glu	Arg	Leu	Val
	50					55					60				
Asn	Gly	Ile	Gln	Lys	Leu	Lys	Thr	Thr	Ala	Ser	Gln	Val	Gly	Asp	Leu
65					70					75				80	
Lys	Ala	Arg	Leu	Ala	Ser	Gln	Glu	Ala	Glu	Leu	Gln	Leu	Arg	Asn	His
			85						90					95	
Asp	Ala	Glu	Ala	Leu	Ile	Thr	Lys	Ile	Gly	Leu	Gln	Thr	Glu	Lys	Val
		100						105					110		
Ser	Arg	Glu	Lys	Thr	Ile	Ala	Asp	Ala	Glu	Glu	Arg	Lys	Val	Thr	Ala
	115						120					125			
Ile	Gln	Thr	Glu	Val	Phe	Gln	Lys	Gln	Arg	Glu	Cys	Glu	Ala	Asp	Leu
	130					135					140				
Leu	Lys	Ala	Glu	Pro	Ala	Leu	Val	Ala	Ala	Thr	Ala	Ala	Leu	Asn	Thr
145					150				155					160	
Leu	Asn	Arg	Val	Asn	Leu	Ser	Glu	Leu	Lys	Ala	Phe	Pro	Asn	Pro	Pro
			165						170					175	
Ile	Ala	Val	Thr	Asn	Val	Thr	Ala	Ala	Val	Met	Val	Leu	Leu	Ala	Pro
		180						185					190		
Arg	Gly	Arg	Val	Pro	Lys	Asp	Arg	Ser	Trp	Lys	Ala	Ala	Lys	Val	Phe
	195						200					205			
Met	Gly	Lys	Val	Asp	Asp	Phe	Leu	Gln	Ala	Leu	Ile	Asn	Tyr	Asp	Lys
	210					215						220			
Glu	His	Ile	Pro	Glu	Asn	Cys	Leu	Lys	Val	Val	Asn	Glu	His	Tyr	Leu
225					230					235					240
Lys	Asp	Pro	Glu	Phe	Asn	Pro	Asn	Leu	Ile	Arg	Thr	Lys	Ser	Phe	Ala
			245						250					255	
Ala	Ala	Gly	Leu	Cys	Ala	Trp	Val	Ile	Asn	Ile	Ile	Lys	Phe	Tyr	Glu
		260						265					270		
Val	Tyr	Cys	Asp	Val	Glu	Pro	Lys	Arg	Gln	Ala	Leu	Ala	Gln	Ala	Asn
	275						280					285			
Leu	Glu	Leu	Ala	Ala	Ala	Thr	Glu	Lys	Leu	Glu	Ala	Ile	Arg	Lys	Lys
	290					295					300				
Leu	Val	Val	Ser	Ala	Asn	Tyr	Asp	Ile	Glu	Lys	Ser	Glu	Lys	Ile	Arg
305					310					315					320
Trp	Gly	Gln	Ser	Ile	Lys	Ser	Phe	Glu	Ala	Gln	Glu	Lys	Thr	Leu	Cys
			325						330					335	
Gly	Asp	Val	Leu	Leu	Thr	Ala	Ala	Phe	Val	Ser	Tyr	Val	Gly	Pro	Phe

aaattggcaa atcctcacta taagccggaa ttacaagctc agacaactct cctcaatttc
1800
acagtcacag aagatgggtct agaagcccag ctgctggcag aggttggtcag tattgaaagg
1860
ccagatttgg agaaaacttaa gttggtattg acaaagcacc aaaatgattt taaaattgag
1920
ctcaagtatc tggaagacga tctccttttg cgcctttctg cggcagaggg aagctttctg
1980
gatgacacca aactggtaga gagattggag gcaacaaaga ccaccgtggc agagatagag
2040
cacaagggtga ttgaagccaa agaaaatgaa agaaaaatca acgaggcccg agaattgtac
2100
agaccagtgg cagcaagagc atctcttctt tattttgtta ttaatgacct ccaaaaaatc
2160
aacccccctc accaattctc tttgaaggct tttaacgtgc tggtccacag agcgatcgag
2220
caggctgaca aggtggaaga catgcaggga cgcattctta tctgatgga gagcatcacc
2280
catgctgtct tcctctacac cagccaggcg ctgtttgaga aggacaagct caccttctg
2340
tcccagatgg cttttcagat tttgttgaga aagaaagaga tagaccctct tgaattggat
2400
ttcctgcttc gattcacagt tgaacacact catctgagtc ccgttgactt cctaacttct
2460
cagtcatgga gtgctatcaa ggcaattgcc gtcattggaag aatttcgagg catagaccga
2520
gatgtggaag gatctgcaa gcagtggagg aagtgggtag aatccgagtg tccagaaaaa
2580
gaaaaattac ctcaagaatg gaagaagaaa agtttaatac agaagctgat tcttctgaga
2640
gcaatgcgcc ctgacagaat gacgtatgct ctcagaaatt ttgtagagga aaaactgggt
2700
gcgaagtatg tggagaggac cagattggac ttagttaaag cattcgaaga aagcagccca
2760
gccaccccca tattcttcat cctgtctccg ggggtagatg cccttaaaga cctggagatt
2820
cttggcaaaa gacttggtt tacaattgac tctggaaaat tccacaatgt gtctttagga
2880
caagggtcagg agacggtggc agaagtggcc ctggagaaag cttccaaagg aggacactgg
2940
gtcatcctcc aaaatgttca tttggtagcc aagtggctag gaaccttga gaagctcctt
3000
gaaagattca gccaaaggaag ccacagagat tacagggttt tcatgagtgc tgagtctgca
3060
cctacaccag atgagcatat catccctcaa ggactcctgg aaaattccat taagatcact
3120
aatgaacccc caacagggat gctggccaat ttgcatgccg ccctgtacaa ctttgatcag
3180
gtaagaaagc gaagcaggct aggcagacaa tgaagtcaga gtcattctac aagactgtgg
3240
ggcccagaat caaccaggc atgtcattga gagggatgaa gcaagttctt aatgttcgca
3300
tgtggaaggg taggggtggg cgtgttttaa tctcttgaaa gaattgcccc tgtcatttcc
3360

atttacttga ttttttttaa gttgtatttt taatttgaga ggatttcaca tgaactgtaa
180
tgtttgtgtt ttcagccagt gcacaaagac tctattagcc ttttcatggc acatgttcac
240
accactgtaa atgaaatgag taccagatat taccagaatg agagaagaca caactatacc
300
accccaaaga gtttttctaga acaaatatca ctgtttaaga acctgttgaa gaagaagcaa
360
aatgaggtat ccgagaaaaa agaacgcctg gtgaacggca tccaaaagct aaaaaccaca
420
gcctctcagg tgggagatct aaaagccaga cttgcctctc aagaagccga gctgcaactg
480
agaaatcatg atgccgaagc tctgatcaca aagatcggcc ttcagacgga gaaagtgagc
540
cgggaaaaga ccatcgctga tgctgaggag cgaaagggtga cagccattca gactgaagtg
600
ttccagaaac agagagaatg tgaagctgac ttactcaagg ctgagcctgc actggtggct
660
gctacagctg cactcaatac actcaacagg gtcaacctca gtgagctgaa agcctttccc
720
aaccctcca tcgcagttac caatgttact gcagccgtga tggctccttct ggctcctcgg
780
ggaagagtgc ccaaagaccg aagttggaaa gcagctaaag tcttcatggg aaaggttgat
840
gattttttgc aagcattaat taactatgac aaagagcaca ttccagagaa ctgtctaaaa
900
gtggtgaatg aacactattht gaaagaccca gagtttaatc caaacctgat tcgaacaaaa
960
tcttttgcag cagctggcct gtgtgcctgg gtcacaaaca tcattaaatt ctatgaggtc
1020
tactgtgatg tggagccaaa acgccaagca ttagcccaag caaacctaga actggctgca
1080
gctactgaaa aactagaggc tatcaggaaa aagcttgtgg tgagtgcata ctatgacatt
1140
gaaaagtcag agaagattcg ctgggggtcaa tccattaagt cctttgaagc tcaagagaag
1200
acactctgtg gagatgttct tctcacggcg gcatttgtgt cttacgtcgg acccttcaca
1260
aggcagtatc gccaggagct ggtgcactgc aagtgggttc cctttcttca acagaagggt
1320
tccattccac taaccgaagg cctggacttg atatccatgt tgacggatga tgctacaatt
1380
gccgcctgga ataacgaagg actgcccagt gacagaatgt ccaccgaaaa tgccgctatc
1440
ctaacacact gtgagcgctg gcctctggtg atagatcccc agcaacaggg aattaagtgg
1500
atcaagaata agtatggaat ggacctgaaa gtcacacatt tgggccagaa agggtttttg
1560
aatgccattg aaactgcttt ggcctttggt gatgtcatct taattgaaaa tctcgaggaa
1620
acgatagatc cagtcttggg tccactactt ggcaggaaca caattaaaaa aggaaagtat
1680
atcaggattg gagataaaga atgtgaattt aacaagaact ttcgccttat ccttcacaca
1740

```

      165      170      175
Arg Ser Glu Ala Ala Leu Asp Gln Glu Gln Ile Thr Ala Ala Tyr Ser
      180      185      190
Val Glu His Asn Gln Leu Glu Ala His Pro Lys Ala Asp Phe Ile Arg
      195      200      205
Glu Ser Ser Glu Ala Gln Val Gln Lys Phe Leu Ser Arg Ser Val Glu
      210      215      220
Asp Val Arg Pro His His Thr Asp Ala Asn Asn Gln Ser Ala Cys Phe
      225      230      235      240
Glu Ala Pro Asp Gln Lys Thr Leu Ser Thr Pro Gln Glu Glu Arg Ile
      245      250      255
Ser Ala Val Glu Ser Gln Pro Ser Arg Lys Arg Ser Val Ser His Gly
      260      265      270
Ser Asn His Thr Gln Lys Pro Asp Glu Gln Arg Ser Glu Pro Ser Ala
      275      280      285
Gly Ile Pro Lys Val Thr Ser Arg Cys Ile Asp Ser Lys Glu Pro Ile
      290      295      300
Glu Arg Pro Glu Glu Lys Pro Lys Lys Glu Gly Phe Ile Arg Ser Ser
      305      310      315      320
Glu Gly Pro Lys Pro Glu Lys Val Tyr Lys Ser Lys Ser Glu Thr Arg
      325      330      335
Trp Gly Pro Arg Pro Ser Ser Asn Arg Arg Glu Glu Val Asn Asp Arg
      340      345      350
Pro Val Arg Arg Ser Gly Pro Ile Lys Lys Pro Val Leu Arg Asp Met
      355      360      365
Lys Glu Glu Arg Glu Gln Arg Lys Glu Lys Glu Gly Glu Lys Ala Glu
      370      375      380
Lys Val Thr Glu Lys Val Val Val Lys Pro Glu Lys Thr Glu Lys Lys
      385      390      395      400
Asp Leu Pro Pro Pro Pro Pro Pro Gln Pro Pro Ala Pro Ile Gln
      405      410      415
Pro Gln Ser Val Pro Pro Pro Ile Gln Pro Glu Ala Glu Lys Phe Pro
      420      425      430
Ser Thr Glu Thr Ala Thr Leu Ala Gln Lys Pro Ser Gln Asp Thr Glu
      435      440      445
Lys Pro Leu Glu Pro Val Ser Thr Val Gln Val Glu Pro Ala Val Lys
      450      455      460
Thr Val Asn Gln Gln Thr Met Ala Ala Pro Val Val Lys Glu Lys Glu
      465      470      475      480
Leu Gln Lys Lys Glu Arg Lys Gln Glu Lys Glu Lys Glu Leu Glu Arg
      485      490      495
Gln Lys Glu Lys Glu Lys Glu Leu Gln Lys Lys
      500      505

```

<210> 5617

<211> 3480

<212> DNA

<213> Homo sapiens

<400> 5617

nactcaagct gaatgcttta ttgtaatctc ccaaatacctg tggatagcgc ttaaagatta
60

aataagtttt cgtaggttat actatcattt ttttttctga ctttttagaaa aaaaatgatc
120

agtcagcctt cccggaag aagtgtttcc catggatcta accatacgca aaaaccagac
 840
 gagcagagaa gtgaaccatc tgcaggcatt cctaaagtaa ccagcagatg cattgattca
 900
 aaagaaccaa tagaaaggcc agaggagaaa ccaaaaaagg aaggctttat acgatcttct
 960
 gaaggaccaa aacctgaaaa agtatataaa tctaaatcag aaactcgttg gggcccacga
 1020
 ccaagctcta acagaaggga agaagttaat gatagacctg tgagaagatc aggtccatt
 1080
 aaaaaacctg tacttagaga tatgaaagag gaacgggaac agaggaagga gaaagaagga
 1140
 gaaaaggccg aaaaggtcac tgaaaaagta gttgtaaagc ctgaaaagac ggaaaagaag
 1200
 gatcttcttc ctccccacc accacctcag ccaccagcac caattcagcc acagtcaagt
 1260
 ccaccaccaa ttcaaccaga agcagagaaa tttccttcaa cagaaactgc aactttggct
 1320
 caaaaacat ctcaggatac tgagaagcct ctggaacctg tgagtactgt tcaggtagag
 1380
 cctgcagtta agactgtaaa ccaacagact atggcagcac cagtagtcaa agaaaaagaa
 1440
 ctacaaaaga aagaaagaaa gcaagaaaaa gaaaaagaac tagaacggca gaaagaaaa
 1500
 gaaaaagaac tacaaaaaaa aa
 1522

<210> 5616

<211> 507

<212> PRT

<213> Homo sapiens

<400> 5616

Pro	Ala	Val	Leu	Ser	Gly	Tyr	Phe	Lys	Gln	Phe	Gln	Lys	Ser	Leu	Pro
1				5					10					15	
Pro	Arg	Phe	Gln	Arg	Gln	Gln	Glu	Gln	Met	Lys	Gln	Gln	Gln	Trp	Gln
			20						25					30	
Gln	Gln	Gln	Gln	Gln	Gly	Val	Leu	Pro	Gln	Thr	Val	Pro	Ser	Gln	Pro
			35						40					45	
Ser	Ser	Ser	Thr	Val	Pro	Pro	Pro	Pro	His	Arg	Pro	Leu	Tyr	Gln	Pro
			50						55					60	
Met	Gln	Pro	His	Pro	Gln	His	Leu	Ala	Ser	Met	Gly	Phe	Asp	Pro	Arg
65						70					75				80
Trp	Leu	Met	Met	Gln	Ser	Tyr	Met	Asp	Pro	Arg	Met	Met	Ser	Gly	Arg
				85						90					95
Pro	Ala	Met	Asp	Ile	Pro	Pro	Ile	His	Pro	Gly	Met	Ile	Pro	Pro	Lys
				100						105					110
Pro	Leu	Met	Arg	Arg	Asp	Gln	Met	Glu	Gly	Ser	Pro	Asn	Ser	Ser	Glu
				115					120						125
Ser	Phe	Glu	His	Ile	Ala	Arg	Ser	Ala	Arg	Asp	His	Ala	Ile	Ser	Leu
				130					135						140
Ser	Glu	Pro	Arg	Met	Leu	Trp	Gly	Ser	Asp	Pro	Tyr	Pro	His	Ala	Glu
145					150						155				160
Pro	Gln	Gln	Ala	Thr	Thr	Pro	Lys	Ala	Thr	Glu	Glu	Pro	Glu	Asp	Val

```
<210> 5615
<211> 1522
<212> DNA
<213> Homo sapiens
```

4797

tcagattatg ctgctgcccc gttacgccag tatcatcggg tgaccaagca gatcaaacct
 660
 gacatggaaa catatgagag actgagagaa aaacatggag aagagttttt cccaacatcc
 720
 aatagtcttc ttcattggaac acatgtgcct tccacagagg aaattgacag gatgggcata
 780
 gatctggaaa aacagattga aaaacgagac aaatatagcc ggagacgtcc ttataatgat
 840
 gatgcagata tcgactacat taatgaaagg aatgccaaat tcaacaagaa agctgaaaga
 900
 ttctatggga aatacacagc tgaaattaaa cagaatttgg aaagaggaac agctgtctaa
 960
 tcccttcaag aactgtttat agaagcttga gaatggggta aaaatttctg ctagcaaaat
 1020
 caagtctttt ttgaaatttt atcagtaatc cagaatttag tagtccatgc cttctcactc
 1080
 agcatttaga aataaaaatg tggttttctta aacgtatatc ctttcatgta tatttccaca
 1140
 tttttgtgct tggatataag atgtatttct tgtagtgaag ttgttttgta atctactttg
 1200
 tatacattct aattatatta tttttctatg tattttaaat gtatatggct gtttaactct
 1260
 tgaagcattt tgggcttaag attgccagca gcacacatca gatgcagtca ttgttgctat
 1320
 cagtgtggaa tttgatagag tctagactcg ggccacttgg agttgtgtac tccaaagcta
 1380
 aggacagtga tgaggaagat ggcagtggcc accggaggac tggagcagtc cctcctcatg
 1440
 gcggcctgtg accaaggtcg gggaggagtg gagctatcct tccatgatct gatcatgtac
 1500
 ttcggagaga ggctggagtg tgctaccgac gtcgaatac catgcagtcg gttagaggct
 1560
 ggagtgtgct accgacgtcg aatatccatg cagactagaa aaccattat ctcagcccaa
 1620
 aatctcctta agctgataag caacttcagc aaagtctcag catacaaaat caatgtaca
 1679

<210> 5614

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5614

Ser Gln Phe Ser Leu Ser Gln Val Leu Val Asp Ser Ala Glu Glu Gly
 1 5 10 15
 Ser Leu Ala Ala Ala Ala Glu Leu Ala Ala Gln Lys Arg Glu Gln Arg
 20 25 30
 Leu Arg Lys Phe Arg Glu Leu His Leu Met Arg Asn Glu Ala Arg Lys
 35 40 45
 Leu Asn His Gln Glu Val Val Glu Glu Asp Lys Arg Leu Lys Leu Pro
 50 55 60
 Ala Asn Trp Glu Ala Lys Lys Ala Arg Leu Glu Trp Glu Leu Lys Glu
 65 70 75 80
 Glu Glu Lys Lys Lys Glu Cys Ala Ala Arg Gly Glu Asp Tyr Glu Lys

```
<210> 5613
<211> 1679
<212> DNA
<213> Homo sapiens
```

```
<400> 5613
ggctaaggct gcatcccagg tgagttcccc cccccgtac cccggagggt ttgttggtga
60
gggttccggg gagcggcctg gagagaggtg gaggcgaagt ctagtttcgc ttcagggagg
120
ctcagaccct gtgggggtcaa gtcggcggtg gaggccctag gctcagcctg tggggaccgg
180
cggggactcg gcctgggcag tcctgggaga agctgagccg gctctgctcg aagccagttc
240
tccttgtcgc aggtgctggt ggacagcgcg gaggaggggt ccctcgctgc ggcggcggag
300
ctggccgctc agaagcgcgga acagagactg cgcaaattcc gggagctgca cctgatgcgg
360
aatgaagctc gtaaattaaa tcaccaggaa gttgtggaag aagataaaaag actaaaatta
420
cctgcaaatt gggaagccaa aaaagctcgt ttggagtggg aactaaagga agaggaaaaag
480
aaaaaggaat gtgcggcaag aggagaagac tatgagaaag tgaagttgct ggagatcagt
540
gcagaagatg cagaaagatg ggagaggaaa aagaagagga aaaaccctga tctgggattt
600
```

cgggtectgg cgcctcagag cccggcccag gccgcggaac ggtgatgctc gggccggacg
 180
 ggcgagcgcg gatccctgcg tcccgtgaa aatgtgtgtc tgacatgcaa gctcagtggg
 240
 gcagagaccc gtggattgct gtgccctgcc ctccggacct ggatcatgaa ggtgttgga
 300
 agaagcttct tctgggtgct gtttcccgtc cttccctggg cgggtgcaggc tgtggagcac
 360
 gaggaggtgg cgcagcgtgt gatcaaaactg caccgcgggc gaggggtggc tgccatgcag
 420
 agccggcagt ggggccggga cagctgcagg aagctctcag ggcttctccg ccagaagaat
 480
 gcagttctga aaaaactgaa aactgcaatt ggagcagtgag agaaagacgt gggcctgtcg
 540
 gatgaagaga aactgtttca ggtgcacacg tttgaaattt tccagaaaga gctgaatgaa
 600
 agtgaaaatt ccgttttcca agctgtctac ggactgcaga gagccctgca gggggattac
 660
 aaagatgtcg tgaacatgaa ggagagcagc cggcagcgcc tggaggccct gagagaggct
 720
 gcaataaagg aagaaacaga atatattggaa cttctggcag cagaaaaaca tcaagttgaa
 780
 gcccttaaaa atatgcaaca tcaaaaccaa agtttatcca tgcttgacga gattcttgaa
 840
 gatgtaagaa aggcagcgga tcgtctggag gaagagatag aggaacatgc ttttgacgac
 900
 aataaatcag tcaagggggg caattttgag gcagttctga ggggtggagga agaagaggcc
 960
 aattctaagc aaaatataac aaaacgagaa gtggaggatg acttggttct tagcatgctg
 1020
 attgactccc agaacaacca gtatatattg accaagccca gagattcaac catcccacgt
 1080
 gcagatcacc actttataaa ggacattggt accataggaa tgctgtcttt gccttggtggc
 1140
 tggcgatgta ca
 1152

<210> 5612

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5612

Met	Lys	Val	Leu	Gly	Arg	Ser	Phe	Phe	Trp	Val	Leu	Phe	Pro	Val	Leu
1				5					10					15	
Pro	Trp	Ala	Val	Gln	Ala	Val	Glu	His	Glu	Glu	Val	Ala	Gln	Arg	Val
			20					25					30		
Ile	Lys	Leu	His	Arg	Gly	Arg	Gly	Val	Ala	Ala	Met	Gln	Ser	Arg	Gln
			35				40					45			
Trp	Val	Arg	Asp	Ser	Cys	Arg	Lys	Leu	Ser	Gly	Leu	Leu	Arg	Gln	Lys
	50					55					60				
Asn	Ala	Val	Leu	Asn	Lys	Leu	Lys	Thr	Ala	Ile	Gly	Ala	Val	Glu	Lys
65					70					75				80	
Asp	Val	Gly	Leu	Ser	Asp	Glu	Glu	Lys	Leu	Phe	Gln	Val	His	Thr	Phe

ccatcataag ccctctgaac tctgtctgaa atcggccctt tgaacatcct ctaaccctcg
 1440
 ggaaggcacc cggaccacc tttacctcac cagcagcata tgacaataac attaaatggc
 1500
 tctacagcag aggaagatga aagtaaaagt agcaaataca accaatggcc ttcccatagc
 1560
 tcacagaact cctgagcaga agctgagcag ggaagaaatg gtgtgtagtt tcagggtgtc
 1620
 tggaggtgcc accatttctc cccatttgat gtcagagagg ctttacaaaa aaataaggca
 1680
 acagctctta aggagattct gtatatgtga aattagacgc aatgacaggt ttcgctccca
 1740
 aantatagtt ttagaatata gtctgatatg acaaagtagg gatttttaaa gcctaacatt
 1800
 ttatttcctt gctggggatc agttagtaaa gaaggaggaa ttc
 1843

<210> 5610
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 5610
 Met Arg Arg Asp Phe Lys Phe Lys Leu Ser Ser Thr Pro Leu Gly Val
 1 5 10 15
 Phe Thr Ala Cys Ser Ser Arg Val Gln Met Ala Cys Ile Cys Ala Val
 20 25 30
 Phe Thr Gly Gly Arg Gln Asp His Thr Ser Leu Pro His Trp Ala Cys
 35 40 45
 Leu Leu Val Asp Ser Cys Met Gln Glu Ala Val Met Gly Ser Leu Arg
 50 55 60
 Ile Pro Gln Cys Gly Asn Gly Pro Leu Arg Leu Val Leu Arg Val Pro
 65 70 75 80
 Gly Ala Gln Ser Trp Val Gly Gly Cys Trp Trp Glu Val Arg Asn Lys
 85 90 95
 Phe Trp Leu Pro Ser Gly Gln Leu Pro Thr Ala Leu Thr Trp Glu Val
 100 105 110
 Asp Ala His Arg Gln Asp Ala Leu Gly Tyr Cys Cys Thr Val Leu His
 115 120 125
 Glu Ile Phe Ile Gln Pro Thr Arg Phe Asn Arg Ser Leu Gly Ser Ser
 130 135 140
 Ser Arg Leu Leu Cys Leu Phe Lys His
 145 150

<210> 5611
 <211> 1152
 <212> DNA
 <213> Homo sapiens

<400> 5611
 ngggccgctc cctcccgga ccccgccctc ccggcctccc tggccccgc tgggaaggga
 60
 tgcaaggaag ccctccggcg ctgcgctccg aggcgggaga cagcgctccc ctccgccct
 120

100

105

<210> 5609

<211> 1843

<212> DNA

<213> Homo sapiens

<400> 5609

tttttttttt tttttttttc aagcaatttt ttccctttat tttttttggt aaataagatt
60
ccagaaagta tagtgcaaac actcagtaga aaagttgcaa ttaagaaatg tacattcaca
120
tttaacattt cagtccattc acttttttta aaataaaaaat aggacaaatt attcaattac
180
ttgtctcaat ttaacaatct tgaaaaagac tggaaggtag cctacagtgt tcagttgaca
240
taaaaaataga cccgtattga tcatacaaat ctatcatgag aagttacca gtgagagtga
300
gttattgtaa ttctgaatgt actcatcgtg tttctcactt ctacagaagc atcctcagt
360
agttgtattg tgcgagaaaa tgacaccctt gccacatca ctctccattc catagagggg
420
cacaacccta tctagccaaa cccagaagaa cgcaggcgct tacacaactt ttctcggaca
480
gtcgagaaaa tccaaaagtg ggctttgggc ttaccttaaa taggaatgga atgtaccact
540
acgagatggg catcataata aggacattgt tgtttgagcg gggggtgtgc aatcagtata
600
aatgaggatg gcggaggaag aggagtgggt actgaaggga ggtgggtgcat aataagtgc
660
cgagctacac aaagctcgag ctacacaaag ctcaggctcc acgggcctcg ccttggctcc
720
cagggatgct ctgcagccag cgggaggatg acctgaggtc gggcctgggc ctgtcccttt
780
gtgcatgcgg cgtgatttca aattcaaact aagttccaca ccattaggag ttttcacggc
840
atgcagttcc agagtgc aaa tggttgcag atgtgcagtt tttacagggt gaaggcaaga
900
ccatacatct ctccacact gggcgtgcct cctagtggac agttgtatgc aagaggcgg
960
gatgggctcc ctcaggatcc cccaatgtgg gaatgggtccc ctgagacttg tgcttcgtgt
1020
gcctggggcc cagagttggg tgggggggtg ctggtgggag gtgagaaaca agttctggct
1080
gccgtcgggc cagcttccca ctgccctcac ctgggaggtg gatgccaca ggcaggatgc
1140
tctgggctac tgttgacag tcctgcacga gatatttatt cagcccacaa gatttaaatg
1200
atctcttggg agttcatcta ggctattatg tctgtttaaa cattaattct caataagtgc
1260
ctgaaagctc ttttgaaagc aacctatttg aaggtctgaa ccgcccggta ccagcaggaa
1320
ccaatgccca ggagagggtc agagcacatg tgctctggtg gttgtcaa atctccacat
1380

<400> 5606

```

Met Thr Arg Ala Leu Leu Thr Ser Leu Val Leu Leu Pro Ala Arg Gln
 1           5           10           15
Ala His Pro Cys Arg Ala Leu Ala Leu Thr Ala Pro Ile Phe Leu Leu
      20           25           30
Leu Phe Pro Ser Ser Glu Cys Gly Trp Phe Ser Leu Leu Leu Ser Ser
      35           40           45
Asp Val Pro Ser Ser Ser Leu Glu Arg Pro Pro Trp Met Thr Glu Glu
      50           55           60
Val Thr Thr Thr Ser Ser Arg Ser Thr Pro Arg Pro Ser Val Ser Pro
      65           70           75           80
Ser Gln Cys Leu Ala Pro Ser Asn Ile Ala Phe Cys Val Tyr His Gln
      85           90           95
Phe Pro Phe Thr Arg
      100

```

<210> 5607

<211> 320

<212> DNA

<213> Homo sapiens

<400> 5607

```

gtgcacacgc gaggtatagg ctccagactc ctcaccaaga tgggctatga gtttggcaag
60
ggtttggggc gacacgcgga aggccgggtg gagcccatcc atgctgtggt gttgcctcga
120
gggaagtgcg tggaccagtg tgtggagacc ctgcagaagc agaccagggt tggcaaggct
180
ggcaccaaca agccccccag gtgccgggga agagggggcca ggcctggggg ccgcccagct
240
cctcggaatg tgtttgactt cctcaatgaa aagctgcaag gtcaggctcc tggggcccta
300
caagccgggc ggctcagca
320

```

<210> 5608

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5608

```

Val His Thr Arg Gly Ile Gly Ser Arg Leu Leu Thr Lys Met Gly Tyr
 1           5           10           15
Glu Phe Gly Lys Gly Leu Gly Arg His Ala Glu Gly Arg Val Glu Pro
      20           25           30
Ile His Ala Val Val Leu Pro Arg Gly Lys Ser Leu Asp Gln Cys Val
      35           40           45
Glu Thr Leu Gln Lys Gln Thr Arg Val Gly Lys Ala Gly Thr Asn Lys
      50           55           60
Pro Pro Arg Cys Arg Gly Arg Gly Ala Arg Pro Gly Gly Arg Pro Ala
      65           70           75           80
Pro Arg Asn Val Phe Asp Phe Leu Asn Glu Lys Leu Gln Gly Gln Ala
      85           90           95
Pro Gly Ala Leu Gln Ala Gly Arg Pro Gln

```



```
<210> 5605
<211> 376
<212> DNA
<213> Homo sapiens
```

```
<210> 5606
<211> 101
<212> PRT
<213> Homo sapiens
```

tgtcttttta ataaattttg taagaaaatt ttaaagcaaa tatgttataa aagaaataaa
 2040
 aactaagatg aaaattctca gttttaaaaa
 2070

<210> 5604
 <211> 560
 <212> PRT
 <213> Homo sapiens

<400> 5604
 Arg Phe Gln Arg Val Leu Tyr Phe Ile Cys Ala Phe Gln Asn Ile Ser
 1 5 10 15
 Cys Gly Ile His Tyr Leu Ala Ser Val Phe Met Gly Val Thr Pro His
 20 25 30
 His Val Cys Arg Pro Pro Gly Asn Val Ser Gln Val Val Phe His Asn
 35 40 45
 His Ser Asn Trp Ser Leu Glu Asp Thr Gly Ala Leu Leu Ser Ser Gly
 50 55 60
 Gln Lys Asp Tyr Val Thr Val Gln Leu Gln Asn Gly Glu Ile Trp Glu
 65 70 75 80
 Leu Ser Arg Cys Ser Arg Asn Lys Arg Glu Asn Thr Ser Ser Leu Gly
 85 90 95
 Tyr Glu Tyr Thr Gly Ser Lys Lys Glu Phe Pro Cys Val Asp Gly Tyr
 100 105 110
 Ile Tyr Asp Gln Asn Thr Trp Lys Ser Thr Ala Val Thr Gln Trp Asn
 115 120 125
 Leu Val Cys Asp Arg Lys Trp Leu Ala Met Leu Ile Gln Pro Leu Phe
 130 135 140
 Met Phe Gly Val Leu Leu Gly Ser Val Thr Phe Gly Tyr Phe Ser Asp
 145 150 155 160
 Arg Leu Gly Arg Arg Val Val Leu Trp Ala Thr Ser Ser Ser Met Phe
 165 170 175
 Leu Phe Gly Ile Ala Ala Ala Phe Ala Val Asp Tyr Tyr Thr Phe Met
 180 185 190
 Ala Ala Arg Phe Phe Leu Ala Met Val Ala Ser Gly Tyr Leu Val Val
 195 200 205
 Gly Phe Val Tyr Val Met Glu Phe Ile Gly Met Lys Ser Arg Thr Trp
 210 215 220
 Ala Ser Val His Leu His Ser Phe Phe Ala Val Gly Thr Leu Leu Val
 225 230 235 240
 Ala Leu Thr Gly Tyr Leu Val Arg Thr Trp Trp Leu Tyr Gln Met Ile
 245 250 255
 Leu Ser Thr Val Thr Val Pro Phe Ile Leu Cys Cys Trp Val Leu Pro
 260 265 270
 Glu Thr Pro Phe Trp Leu Leu Ser Glu Gly Arg Tyr Glu Glu Ala Gln
 275 280 285
 Lys Ile Val Asp Ile Met Ala Lys Trp Asn Arg Ala Ser Ser Cys Lys
 290 295 300
 Leu Ser Glu Leu Leu Ser Leu Asp Leu Gln Gly Pro Val Ser Asn Ser
 305 310 315 320
 Pro Thr Glu Val Gln Lys His Asn Leu Ser Tyr Leu Phe Tyr Asn Trp
 325 330 335
 Ser Ile Thr Lys Arg Thr Leu Thr Val Trp Leu Ile Trp Phe Thr Gly

ttggaggaca cgggggccct gttgtcttca ggccagaaaag attatgttac ggtgcagttg
420
cagaatggtg agatctggga gctctcaagg tgtagcagga ataagagggga gaacacatcg
480
agtttgggct atgaatacac tggcagtaag aaagagtttc cttgtgtgga tggctacata
540
tatgaccaga acacatggaa aagcactgcg gtgacccagt ggaacctggt ctgtgaccga
600
aaatggcttg caatgctgat ccagccccta tttatgtttg gagtcctact gggatcgggtg
660
acttttggct acttttctga caggctagga cgccgggtgg tcttgtgggc cacaagcagt
720
agcatgtttt tgtttggaat agcagcggcg tttgcagttg attattacac cttcatggct
780
gctcgtttt ttcttgccat ggttgcaagt ggctatcttg tgggtggggt tgtctatgtg
840
atggaattca ttggcatgaa gtctcggaca tgggcgtctg tccatttgca ttcctttttt
900
gcagttggaa cctgctggtt ggctttgaca ggatacttgg tcaggacctg gtggctttac
960
cagatgatcc tctccacagt gactgtcccc tttatcctgt gctgttgggt gctcccagag
1020
acaccttttt ggcttctctc agagggacga tatgaagaag cacaaaaaat agttgacatc
1080
atggccaagt ggaacagggc aagctcctgt aaactgtcag aacttttata actggacctt
1140
caaggctctg ttagtaatag cccactgaa gttcagaagc acaacctata atatctgttt
1200
tataactgga gcattacgaa aaggacactt accgtttggc taatctggtt cactggaagt
1260
ttgggattct actcgttttc cttgaattct gttacttag gaggcaatga atacttaaac
1320
ctcttctcc tgggtgtagt ggaaattccc gcctacacct tcgtgtgcat cgccatggac
1380
aaggctggga ggagaacagt cctggcctac tctcttttct gcagtgcact ggcctgtggt
1440
gtcgttatgg tgatcccca gaaacattat attttgggtg tggtgacagc tatggttggga
1500
aaatttgcca tcggggcagc atttggcctc atttatcttt atacagctga gctgtatcca
1560
accattgtaa gatcgtggc tgtgggaagc ggcagcatgg tgtgtcgcct ggccagcatc
1620
ctggcgccgt tctctgtgga cctcagcagc atttggatct tcataccaca gttgtttgtt
1680
gggactatgg cctcctgag tggagtgtta aactaaagc ttccagaaac ccttgggaaa
1740
cggctagcaa ctacttggga ggaggctgca aaactggagt cagagaatga aagcaagtca
1800
agcaaattac ttctcacaac taataatagt gggctggaaa aaacggaagc gattaccccc
1860
agggattctg gtcttgggtga ataaatgtgc catgcctgct gtctagcacc tgaaatatta
1920
tttaccctaa tgcctttgta ttagaggaat cttattctca tctcccatat gttgtttgta
1980

<210> 5602
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 5602

```

Met Ala Ala Phe Gly Arg Gln Val Leu Asp Trp His Arg Leu Ile Pro
 1           5           10           15
Leu Thr Trp Ala Cys Met Ala Arg Gln Thr Arg His Leu Gly Glu Gln
 20           25           30
Arg Arg Thr Thr Ala Ser Leu Leu Arg Lys Leu Thr Thr Ala Ser Asn
 35           40           45
Gly Gly Val Ile Glu Glu Leu Ser Cys Val Arg Ser Asn Asn Tyr Val
 50           55           60
Gln Glu Pro Glu Cys Arg Arg Asn Leu Val Gln Cys Leu Leu Glu Lys
 65           70           75           80
Gln Gly Thr Pro Val Val Gln Gly Ser Leu Glu Leu Glu Arg Val Met
 85           90           95
Ser Ser Leu Leu Asp Met Gly Phe Ser Asn Ala His Ile Asn Glu Leu
 100          105          110
Leu Ser Val Arg Arg Gly Ala Ser Leu Gln Gln Leu Leu Asp Ile Ile
 115          120          125
Ser Glu Phe Ile Leu Leu Gly Leu Asn Pro Glu Pro Val Cys Val Val
 130          135          140
Leu Lys Lys Ser Pro Gln Leu Leu Lys Leu Pro Ile Met Gln Met Arg
 145          150          155          160
Lys Arg Ser Ser Tyr Leu Gln Lys Leu Gly Leu Gly Glu Gly Lys Leu
 165          170          175
Lys Arg Val Leu Tyr Cys Cys Pro Glu Ile Phe Thr Met Arg Gln Gln
 180          185          190
Asp Ile Asn Asp Thr Val Arg Leu Leu Lys Glu Lys Cys Leu Phe Thr
 195          200          205
Val Pro Leu His Ala
 210

```

<210> 5603
 <211> 2070
 <212> DNA
 <213> Homo sapiens

<400> 5603

```

ngcttctagg ccttctcagt agatggagct aagtaataata tgtatatata ctaaccacaca
60
gatataaata tgtctataat tatttctata tttatccatt cgtgtatatg ttaagataaa
120
catgatggag acccttcaaa tttgcttatg ttctttttca gcctatagac cagatataat
180
aattagcttt tcttctcttg cagattccag agagtcctct atttcatatg tgccttccag
240
aacatctctt gtggatttca ctacttggt tctgtgttca tgggagtcac cctcatcat
300
gtctgcaggc cccaggcaa tgtgagtcag gttgttttcc ataatcactc taattggagt
360

```

Val	Leu	Glu	Asn	Leu	Glu	Val	Lys	Ser	Gly	Ser	Pro	Ala	Val	Leu	Ala
		755					760					765			
Phe	Ala	Lys	Glu	Lys	Ser	Phe	Gly	Trp	Pro	Ser	Phe	Ile	Thr	Tyr	Thr
	770					775					780				
Val	Gly	Val	Ser	Asp	Pro	Ala	Ala	Gly	Ser	Gln	Gly	Pro	Leu	Ser	Thr
785					790					795				800	
Thr	Leu	Thr	Phe	Ser	Ser	Pro	Val	Thr	Asn	Gln	Ala	Ile	Ala	Ile	Pro
			805						810					815	
Val	Thr	Val	Ala	Phe	Val	Met	Asp	Arg	Arg	Gly	Pro	Gly	Pro	Tyr	Gly
			820					825					830		
Ala	Ser	Leu	Phe	Gln	His	Phe	Leu	Asp	Ser	Tyr	Gln	Val	Met	Phe	Phe
		835					840					845			
Thr	Leu	Phe	Ala	Leu	Leu	Ala	Gly	Thr	Ala	Val	Met	Ile	Ile	Ala	Tyr
	850				855						860				
His	Thr	Val	Cys	Thr	Pro	Arg	Asp	Leu	Ala	Val	Pro	Ala	Ala	Leu	Thr
865					870					875				880	
Pro	Arg	Ala	Ser	Pro	Gly	His	Ser	Pro	His	Tyr	Phe	Ala	Ala	Ser	Ser
			885						890					895	
Pro	Thr	Ser	Pro	Asn	Ala	Leu	Pro	Pro	Ala	Arg	Lys	Ala	Ser	Pro	Pro
			900						905					910	
Ser	Gly	Leu	Trp	Ser	Pro	Ala	Tyr	Ala	Ser	His					
		915					920								

<210> 5601

<211> 670

<212> DNA

<213> Homo sapiens

<400> 5601

```

ggccgtaact gctgccatct tctccgcgct atggctgcgt tcggccgtca ggtccttgat
60
tggcacccgcc tgatccccct cacctggggc tgatatggcta ggcagactcg tcatcttgga
120
gaacagagaa ggacgacagc ttctttgttg cgcaaactga ctacagcctc caatggaggg
180
gtcattgagg agttatcttg tgtagatcc aataactatg tgcaggaacc agagtgcagg
240
aggaatcttg ttcagtgcct ccttgagaag caggggactc ctgtggtaca agggtccttg
300
gagctagaga gggtcagtga ttccctcctg gacatgggtt tcagcaatgc ccatattaat
360
gaattgctca gtgtacggcg aggtgccagt cttcaacagt tgctggacat catttcagaa
420
tttattctct tgggtctgaa tcagagcct gtgtgtgtgg tcttgaagaa aagtcctccag
480
ttattgaaac tgcctattat gcaaatgagg aagcgctcca gttacctgca aaagcttggg
540
cttgagagaag ggaaattaaa gaggggtgctt tactgttgcc ctgaaatttt caccatgcgc
600
cagcaggaca ttaacgacac tgtcaggctt ctcaaggaga agtgcctttt caggtaccc
660
cttcacgcgt
670

```

```

305          310          315          320
Lys Leu Gln Leu Leu Asn Pro Glu Ile Glu Ala Glu Gln Ile Leu Met
          325          330          335
Ser Pro Asn Ser Tyr Ile Lys Leu Gln Thr Asn Arg Asp Gly Ala Ala
          340          345          350
Ser Leu Ser Tyr Arg Val Leu Asp Gly Pro Glu Lys Val Pro Val Val
          355          360          365
His Val Asp Glu Lys Gly Phe Leu Ala Ser Gly Ser Met Ile Gly Thr
          370          375          380
Ser Thr Ile Glu Val Ile Ala Gln Glu Pro Phe Gly Ala Asn Gln Thr
385          390          395          400
Ile Ile Val Ala Val Lys Val Ser Pro Val Ser Tyr Leu Arg Val Ser
          405          410          415
Met Ser Pro Val Leu His Thr Gln Asn Lys Glu Ala Leu Val Ala Val
          420          425          430
Pro Leu Gly Met Thr Val Thr Phe Thr Val His Phe His Asp Asn Ser
          435          440          445
Gly Asp Val Phe His Ala His Ser Ser Val Leu Asn Phe Ala Thr Asn
          450          455          460
Arg Asp Asp Phe Val Gln Ile Gly Lys Gly Pro Thr Asn Asn Thr Cys
465          470          475          480
Val Val Arg Thr Val Ser Val Gly Leu Thr Leu Leu Arg Val Trp Asp
          485          490          495
Ala Glu His Pro Gly Leu Ser Asp Phe Met Pro Leu Pro Val Leu Gln
          500          505          510
Ala Ile Ser Pro Glu Leu Ser Gly Ala Met Val Val Gly Asp Val Leu
          515          520          525
Cys Leu Ala Thr Val Leu Thr Ser Leu Glu Gly Leu Ser Gly Thr Trp
530          535          540
Ser Ser Ser Ala Asn Ser Ile Leu His Ile Asp Pro Lys Thr Gly Val
545          550          555          560
Ala Val Ala Arg Ala Val Gly Ser Val Thr Val Tyr Tyr Glu Val Ala
          565          570          575
Gly His Leu Arg Thr Tyr Lys Glu Val Val Val Ser Val Pro Gln Arg
          580          585          590
Ile Met Ala Arg His Leu His Pro Ile Gln Thr Ser Phe Gln Glu Ala
          595          600          605
Thr Ala Ser Lys Val Ile Val Ala Val Gly Asp Arg Ser Ser Asn Leu
          610          615          620
Arg Gly Glu Cys Thr Pro Thr Gln Arg Glu Val Ile Gln Ala Leu His
625          630          635          640
Pro Glu Thr Leu Ile Ser Cys Gln Ser Gln Phe Lys Pro Ala Val Phe
          645          650          655
Asp Phe Pro Ser Gln Asp Val Phe Thr Val Glu Pro Gln Phe Asp Thr
          660          665          670
Ala Leu Gly Gln Tyr Phe Cys Ser Ile Thr Met His Arg Leu Thr Asp
          675          680          685
Lys Gln Arg Lys His Leu Ser Met Lys Lys Thr Ala Leu Val Val Ser
690          695          700
Ala Ser Leu Ser Ser Ser His Phe Ser Thr Glu Gln Val Gly Ala Glu
705          710          715          720
Val Pro Phe Ser Pro Gly Leu Phe Ala Asp Gln Ala Glu Ile Leu Leu
          725          730          735
Ser Asn His Tyr Thr Ser Ser Glu Ile Arg Val Phe Gly Ala Pro Glu

```

ctcttccagc acttcttgga ttctaccag gtcattgttct tcacgtctctt cgccctgttg
 4320
 gctgggacag cggatcatgat catagcctac cacactgtct gcagctttat atatgagttg
 4380
 ggcgacatta atatttggtc tgcttctatt tcagggttga gcagctgcag cttctcaaac
 4440
 acctggactt ggatctcatc cgagagttct ctggccaggc catacagctg gc
 4492

<210> 5600

<211> 923

<212> PRT

<213> Homo sapiens

<400> 5600

Phe	Pro	Ala	Pro	Ala	Lys	Ala	Val	Val	Tyr	Val	Ser	Asp	Ile	Gln	Glu
1				5					10					15	
Leu	Tyr	Ile	Arg	Val	Val	Asp	Lys	Val	Glu	Ile	Gly	Lys	Thr	Val	Lys
			20					25					30		
Ala	Tyr	Val	Arg	Val	Leu	Asp	Leu	His	Lys	Lys	Pro	Phe	Leu	Ala	Lys
			35				40					45			
Tyr	Phe	Pro	Phe	Met	Asp	Leu	Lys	Leu	Arg	Ala	Ala	Ser	Pro	Ile	Ile
	50				55					60					
Thr	Leu	Val	Ala	Leu	Asp	Glu	Ala	Leu	Asp	Asn	Tyr	Thr	Ile	Thr	Phe
65					70					75				80	
Leu	Ile	Arg	Gly	Val	Ala	Ile	Gly	Gln	Thr	Ser	Leu	Thr	Ala	Ser	Val
			85					90					95		
Thr	Asn	Lys	Ala	Gly	Gln	Arg	Ile	Asn	Ser	Ala	Pro	Gln	Gln	Ile	Glu
			100					105					110		
Val	Phe	Pro	Pro	Phe	Arg	Leu	Met	Pro	Arg	Lys	Val	Thr	Leu	Leu	Ile
			115				120					125			
Gly	Ala	Thr	Met	Gln	Val	Thr	Ser	Glu	Gly	Gly	Pro	Gln	Pro	Gln	Ser
			130				135				140				
Asn	Ile	Leu	Phe	Ser	Ile	Ser	Asn	Glu	Ser	Val	Ala	Leu	Val	Ser	Ala
145					150					155				160	
Ala	Gly	Leu	Val	Gln	Gly	Leu	Ala	Ile	Gly	Asn	Gly	Thr	Val	Ser	Gly
			165					170					175		
Leu	Val	Gln	Ala	Val	Asp	Ala	Glu	Thr	Gly	Lys	Val	Val	Ile	Ile	Ser
			180					185					190		
Gln	Asp	Leu	Val	Gln	Val	Glu	Val	Leu	Leu	Leu	Arg	Ala	Val	Arg	Ile
			195					200				205			
Arg	Ala	Pro	Ile	Met	Arg	Met	Arg	Thr	Gly	Thr	Gln	Met	Pro	Ile	Tyr
			210				215					220			
Val	Thr	Gly	Ile	Thr	Asn	His	Gln	Asn	Pro	Phe	Ser	Phe	Gly	Asn	Ala
225					230					235				240	
Val	Pro	Gly	Leu	Thr	Phe	His	Trp	Ser	Val	Thr	Lys	Arg	Asp	Val	Leu
			245					250					255		
Asp	Leu	Arg	Gly	Arg	His	His	Glu	Ala	Ser	Ile	Arg	Leu	Pro	Ser	Gln
			260					265					270		
Tyr	Asn	Phe	Ala	Met	Asn	Val	Leu	Gly	Arg	Val	Lys	Gly	Arg	Thr	Gly
			275					280					285		
Leu	Arg	Val	Val	Val	Lys	Ala	Val	Asp	Pro	Thr	Ser	Gly	Gln	Leu	Tyr
			290					295				300			
Gly	Leu	Ala	Arg	Glu	Leu	Ser	Asp	Glu	Ile	Gln	Val	Gln	Val	Phe	Glu

cctcgagcca gccctggaca cagccccac tatttcgctg cctcatcacc cacatctccc
2700
aatgcattgc ctctgctcg caaagccagc cctccctcag ggctgtggag cccagcctat
2760
gcctccact aggcgcgtg aaggttcccg gaggatgggt ctcagccgag cctcgtgcac
2820
ccccaagatg gaacatccct gctgcattca cactggaaca agcccctcca gatgagtgc
2880
ccggccccag gccagcttca ctgccgtctc ttcacacaga gctgtagttt cggctctgcc
2940
cattagctca ttttatgtag gagttttaa tgtgtgtttt tttcctttca agtcttacia
3000
agctaagact ttttggctca ttcctttttg catggttgtc tagggtttct ggacaatgtg
3060
ctggtgcatt tttattttcc tagccttgct. aaaatcttcc ccttctcaag actttgagca
3120
gttagaagtg ctcttttagaa gttgtctgtg ggtgatgtta ctgtagtggg ctcagggaaa
3180
ggattgtcca gttactttag ggggtttttg gtgggggttt tccccctgtg aaaacttact
3240
ttgcccttag tctggctgct gctaggactt ctgaggagca atgggacatg agtgtccctg
3300
tatctgcgcc actgccgcaa ggggaagcctc aggaaccagc acctggaggc caggatagcc
3360
aagccctggg tgagcgagag gctggagaac acaggagctc acccagggct gctgccaac
3420
catggggccac tgtgaacaga cttcagtctt ctgtttttgt ttcataagcc gttgagacat
3480
ctgatggact tggcttaggc cctgctggga catccacgt gtgatccctt tcactccatc
3540
aggacaccag gactgtcctt agggaaatgt ccttgagatg gcagcaggag tcatattttc
3600
tgtgtgtgtg tttcgaaag ccgctgtgtc ctgcctcagc acaaagacc agtgtcattt
3660
gtcctcctg ttcctgtgcc actccagaac ctcagcagat ctgagccacc gcctgccagt
3720
gtgagaggcg gccactttca tggcagctca tcaggcgag ggccccagac agcttcccag
3780
caggccctag agcccggcct gggccaatga tggagggcg ccaccagccc agggcctgcc
3840
catccagaag ggactcccca gggcctgggg gaggagacc ttggaaaagt cctctcttcc
3900
cagctcctga tcttgatct gagattctca gatcacaggc cctgtgtctc caggccgagg
3960
ctgggtacc ctcagggaga tccagagact catgccatg gccatccatg cgtggacgt
4020
gtgtggagag tccaggatga cgggatcccc cacaagctcc cttcagtcct tcagggtg
4080
gccatgtggt tgatttttct aaagctggag aaaggaagaa ttgtgccttg catattactt
4140
gagcttaaac tgacaacctg gatgtaaata ggagccttcc tactgggtta ttaataaag
4200
ttctatgtgc cagtggcttt tgtggtggat cgccgtgggc ccggtcctta tggagccagc
4260

tatataaagc tgcagacaaa cagggatggt gcagcctctc tgagctaccg cgtcctggat
1080
ggacccgaaa aggttccagt tgtgcatggt gatgagaaag gctttctagc atcagggctc
1140
atgatcggga catccacat cgaagtgatt gcacaagagc cctttggggc caaccaaacc
1200
atcattgttg ctgtaaaggt atccccgtt tctacctga gggtttccat gagccctgtc
1260
ctgcacaccc agaacaagga ggccctggtg gccgtgcctt tgggaatgac cgtgaccttc
1320
actgtccact tccacgacaa ctctggagat gtcttccatg ctacagttc ggtcctcaac
1380
tttgccacta acagagacga ctttgtgcag atcgggaagg gccccacaa caacacctgt
1440
gttgctcgca cagtcagcgt gggcctgaca ctgctccgtg tgtgggacgc agagcaccog
1500
ggcctctcgg acttcatgcc cctgcctgtc ctacaggcca tctcccaga gctgtctggg
1560
gccatggtgg tgggggacgt gctctgtctg gccactgttc tgaccagcct ggaaggcctc
1620
tcaggaacct ggagctcttc ggccaacagc atcctccaca tcgacccaa gacgggtgtg
1680
gctgtggccc gggcctggtg atccgtgacg gtttactatg aggtcgtgtg gcacctgagg
1740
acctacaagg aggtggtggt cagcgtccct cagaggatca tggcccgta cctccacccc
1800
atccagacaa gcttccagga ggctacagcc tccaaagtga ttgttgccgt gggagacaga
1860
agctctaacc tgagaggcga gtgcaccccc acccagaggg aagtcacca ggccttgac
1920
ccagagaccc tcatcagctg ccagtcacag ttcaagccgg ccgtctttga tttcccatct
1980
caagatgtgt tcaccgtgga gccacagttt gacactgttc tcggccagta cttctgtctc
2040
atcaaatgc acaggctgac ggacaagcag cggaagcacc tgagcatgaa gaagacagct
2100
ctggtggtca gtgcctccct ctccagcagc cacttctcca cagagcaggt gggggccgag
2160
gtgcccttca gccaggtct ctccgcccag caggctgaaa tcttttgag caaccactac
2220
accagttccg agatcagggt ctttgggtgc ccggagggtc tggagaactt ggaggtgaaa
2280
tccgggtccc cggcctgtct ggcattcgca aaggagaagt cttttgggtg gccagcttc
2340
atcacatata cggtcggcgt ctccgacccc gcggctggca gccaaagggc tctgtccact
2400
acctgacct tctccagccc cgtgaccaac caagccattg ccatcccagt gacagtggct
2460
tttgtgatgg atcgccgtgg gcccggtcct tatggagcca gcctcttcca gcacttctgt
2520
gattctacc aggtcatggt cttcacgtc ttccgctgt tggctgggac agcggctcatg
2580
atcatagcct accacactgt ctgcacgccc cgggatcttg ctgtgcctgc agccctcacg
2640

210	215	220
Lys Lys Pro Asp Pro Ala Ser Leu Arg Ala Ala Ser Cys Gly Glu Gly		
225	230	235
Lys Lys Arg Lys Ala Cys Lys Asn Cys Thr Cys Gly Leu Ala Glu Glu		240
	245	250
Leu Glu Lys Glu Lys Ser Arg Glu Gln Met Ser Ser Gln Pro Lys Ser		255
	260	265
Ala Cys Gly Asn Cys Tyr Leu Gly Asp Ala Phe Arg Cys Ala Ser Cys		270
	275	280
Pro Tyr Leu Gly Met Pro Ala Phe Lys Pro Gly Glu Lys Val Leu Leu		285
	290	295
Ser Asp Ser Asn Leu His Asp Ala		300
305	310	

<210> 5599

<211> 4492

<212> DNA

<213> Homo sapiens

<400> 5599

```

ttcccgcccc cagccaaggc tgtcgtttac gtgtcggaca ttcaggagct gtacatccgt
60
gtgggttgaca aggtggagat tgggaagaca gtgaaggcat acgtccgcgt gctggacttg
120
cacaagaagc ccttccttgc caaataacttc ccctttatgg acctgaagct ccgagcagcc
180
tccccgatca ttacattggt ggcccttgat gaagcccttg acaactacac catcacattc
240
ctcatccgcg gtgtggccat cggccagacc agtctaactg caagtgtgac caataaagct
300
ggacagagaa tcaactcagc cccacaacag attgaagtct ttccccggtt caggctgatg
360
cccaggaagg tgacactgct tatcggggcc acgatgcagg tcacctccga gggcggcccc
420
cagcctcagt ccaacatcct tttctccatc agcaatgaga gcgttgcgct ggtgagcgct
480
gctgggctgg tacagggcct cgccatcggt aacggcactg tgtctgggct cgtgcaggca
540
gtggatgcag agaccggcaa ggtggtcatc atctctcagg acctcgtgca ggtggagggtg
600
ctgctgctaa gggccgtgag gatccgcgcc cccatcatgc ggatgaggac gggcaccag
660
atgccccatc atgtcaccgg catcaccaac caccagaacc ctttctcctt tggcaatgcc
720
gtgccaggcc tgaccttcca ctggtctgtc accaagcggg acgtcctgga cctccgaggg
780
cggcaccacg aggcgtcgat ccgactcccc tcacagtaca actttgcat gaacgtgctc
840
ggccgggtaa aaggccggac cgggctgagg gtggtggtca aggctgtgga cccacatcg
900
gggcagctgt atggcctggc cagagaactc tcggatgaga tccaagtcca ggtgtttgag
960
aagctgcagc tgctcaacct tgaaatagaa gcagaacaaa tattaatgtc gcccactca
1020

```

gtcaagtggc tcacaacctc ctcagggcac cagaggactc actcactggt tgctgtgatg
 1740
 atatccagtg tccctctgcc cccttccatc cccaaccaca tttgactgta gcattgcac
 1800
 tgtgtcctgt tgtcatatat gttaaccttc aggtattaaa cttgctgcat atcttgacat
 1860
 atcttgagat tctgcatgtc ttgtaaagag aggggatgtg catttggtg tgatgttgga
 1920
 tagtcatcca cgctcagttt ggaccattgg aggaacttag tgtcacgcac aaatggggct
 1980
 attcctacgc ttagaatagg gcttgtctgc ccactttaga agagtccagg ttggtgagca
 2040
 tttagagga agcagggcag aactctgaac gacaatacgt ctctctgagc agagaccct
 2100
 ttgttcttgt tatccacca tatggacttg gaatcaatct tgccaaatat ttggagagat
 2160
 tgtgtggatt taagagacct ggatttttat attttaccag taaataaaag ttttcattga
 2220
 tatctgtcct tgaaaaaaaa
 2240

<210> 5598

<211> 312

<212> PRT

<213> Homo sapiens

<400> 5598

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1				5				10					15		
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
		20						25				30			
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
		35				40						45			
Gln	Leu	Leu	Gln	Ser	Ala	His	Lys	Glu	Ser	Ser	Phe	Asp	Ile	Ile	Leu
	50					55					60				
Ser	Gly	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala	Glu	Ile	Leu
65					70					75				80	
Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu	Phe	Leu	Lys
			85					90					95		
Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val	Lys	Thr	Ala
		100						105					110		
Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val	Glu	Val	Lys
		115					120					125			
Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln	Ser	Val	Arg
	130					135					140				
Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val	Gln	Ile	Thr
145				150						155				160	
Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln	Leu	Lys	Leu
			165					170					175		
Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala	Val	Asp	Pro
		180						185					190		
Ala	Ala	Ala	Lys	Leu	Trp	Thr	Leu	Ser	Ala	Asn	Asp	Met	Glu	Asp	Asp
		195				200						205			
Ser	Met	Asp	Leu	Ile	Asp	Ser	Asp	Glu	Leu	Leu	Asp	Pro	Glu	Asp	Leu

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct
120
ttagcatata cagtagagtt tctaattgttgc tcagcattcc ctagtgggag gttacaagtt
180
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg
240
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga
300
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcattcc
360
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgttaaccgg caatgagggc
420
cgctgtcttg tggaaaacat caagcagctg ttgcaatctg ccacaaaaga atccagcttt
480
gacattatct tgtcagggtt agtcccagga agcaccactc tgcacagtgc tgagattttg
540
gctgaaatcg cccggatcct tcggcctggg ggatgtcttt ttctgaagga gccagtagag
600
acagctgtag ataacaatag caaagtgaag acagcatcta agctgtgttc agccctgact
660
ctttctggtc ttgtggaagt gaaagagctg cagcgggagc ccctaaccct tgaggaagta
720
cagtctgttc gagaacacct tggtcatgaa agtgacaacc tgctgtttgt tcagatcaca
780
ggcaaaaaac caaactttga agtgggttct tctaggcagc ttaagctttc catcaccaag
840
aagtcttctc cttcagtgaac acctgctgtg gaccctgctg ctgccaagct gtggaccctc
900
tcagccaacg atatggagga cgacagcatg gatctcattg actcagatga gctgctggat
960
ccagaagatt tgaagaagcc agatccagct tccctgaggg ctgcttcttg tggggaaggg
1020
aaaaagagga aggcctgtaa gaactgcacc tgtggccttg ccgaagaact ggaaaaagag
1080
aagtcaaggg aacagatgag ctcccaacc aagtcagctt gtggaaactg ctacctgggc
1140
gatgccttcc gctgtgccag ctgcccctac cttgggatgc cagccttcaa acctggggaa
1200
aagggtgctt tgagtgatag caatcttcat gatgcctagg aggttctga catgggaccc
1260
atctgtctct ccagccaact cctgtccctc acatcccacc atggtggctc ctcccacctc
1320
ctctggattt gttcactctg agatctgttt gcagagtggg tgcttagcag acagagtga
1380
gctggctggg gggcacagtg gtgtgtagtg ctgctgtgta tcaaaagacc aaggtattat
1440
gggacctggg ttcagaatgg gatgggtttc ttcacctcat gttaagagaa gggagtgtgt
1500
cctgaagaag cccttcttct gatgttaaaa tgctgaccag aacgctcttg agcccaggca
1560
tcgttgagca ttaacactct gtgacagagc tgcagacccc tgccttgagt ctcatctcag
1620
caatgctgcc accctcttgt ctttcagagt tgtagttta ctccattctt tgtgacacga
1680

<210> 5596
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 5596
 Met Pro Leu Ser Gly Thr Pro Ala Pro Asn Lys Lys Arg Lys Ser Ser
 1 5 10 15
 Lys Leu Ile Met Glu Leu Thr Gly Gly Gly Gln Glu Ser Ser Gly Leu
 20 25 30
 Asn Leu Gly Lys Lys Ile Ser Val Pro Arg Asp Val Met Leu Glu Glu
 35 40 45
 Leu Ser Leu Leu Thr Asn Arg Gly Ser Lys Met Phe Lys Leu Arg Gln
 50 55 60
 Met Arg Val Glu Lys Phe Ile Tyr Glu Asn His Pro Asp Val Phe Ser
 65 70 75 80
 Asp Ser Ser Met Asp His Phe Gln Lys Phe Leu Pro Thr Val Gly Gly
 85 90 95
 Gln Leu Gly Thr Ala Gly Gln Gly Phe Ser Tyr Ser Lys Ser Asn Gly
 100 105 110
 Arg Gly Gly Ser Gln Ala Gly Gly Ser Gly Ser Ala Gly Gln Tyr Gly
 115 120 125
 Ser Asp Gln Gln His His Leu Gly Ser Gly Ser Gly Ala Gly Gly Thr
 130 135 140
 Gly Gly Pro Ala Gly Gln Ala Gly Arg Gly Gly Ala Ala Gly Thr Ala
 145 150 155 160
 Gly Val Gly Glu Thr Gly Ser Gly Asp Gln Ala Gly Gly Glu Gly Lys
 165 170 175
 His Ile Thr Val Phe Lys Thr Tyr Ile Ser Pro Trp Glu Arg Ala Met
 180 185 190
 Gly Val Asp Pro Gln Gln Lys Met Glu Leu Gly Ile Asp Leu Leu Ala
 195 200 205
 Tyr Gly Ala Lys Ala Glu Leu Pro Lys Tyr Lys Ser Phe Asn Arg Thr
 210 215 220
 Ala Met Pro Tyr Gly Gly Tyr Glu Lys Ala Ser Lys Arg Met Thr Phe
 225 230 235 240
 Gln Met Pro Lys Phe Asp Leu Gly Pro Leu Leu Ser Glu Pro Leu Val
 245 250 255
 Leu Tyr Asn Gln Asn Leu Ser Asn Arg Pro Ser Phe Asn Arg Thr Pro
 260 265 270
 Ile Pro Trp Leu Ser Ser Gly Glu Pro Val Asp Tyr Asn Val Asp Ile
 275 280 285
 Gly Ile Pro Leu Asp Gly Glu Thr Glu Glu Leu
 290 295

<210> 5597
 <211> 2240
 <212> DNA
 <213> Homo sapiens

<400> 5597
 ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
 60

<400> 5595

ntgatccctg gctcagacag ttcagtggga gaatccaaag gccttttccc tccttctga
60
gcctccggga aaggagggag ggatcttggg tccagggctc cagtaccccc tgtgccattt
120
gagctgcttg cgctcatcat ctctattaat aaccaacttc cctccccac tgccagtgc
180
gccccacgc ctgcccagct cgtgttctcc ggtcacagca gctcagtcct ccaaagctgc
240
tggaccccag gggagagctg accactgccc gagcagccgg ctgaatccac ctccacaatg
300
ccgctctcag gaaccccggc ccctaataag aagaggaaat ccagcaagct gatcatggaa
360
ctcactggag gtggacagga gagctcaggg ttgaacctgg gaaaaagat cagtgtccca
420
agggatgtga tgttggagga actgtcgtg cttaccaacc ggggctccaa gatgttcaaa
480
ctgcggcaga tgagggtgga gaagtttatt tatgagaacc accctgatgt tttctctgac
540
agctcaatgg atcacttcca gaagttcctt ccaacagtgg ggggacagct gggcacagct
600
ggtcagggat tctcatcacg caagagcaac ggcagaggcg gcagccaggc agggggcagt
660
ggctctgccg gacagtatgg ctctgatcag cagcaccatc tgggctctgg gtctggagct
720
gggggtacag gtgggtccgc gggccaggct ggcagaggag gagctgctgg cacagcaggg
780
gttggtgaga caggatcagg agaccaggca ggcggagaag gaaaacatat cactgtgttc
840
aagacctata tttcccatg ggagcgagcc atgggggttg acccccagca aaaaatggaa
900
cttggcattg acctgctggc ctatggggcc aaagctgaac ttcccaaata taagtccttc
960
aacaggacgg caatgcccta tgggtggatat gagaaggcct ccaaacgcat gaccttccag
1020
atgcccaagt ttgacctggg gcccttgctg agtgaacccc tggctctcta caacaaaaac
1080
ctctccaaca ggccttcttt caatcgaacc cctattccct ggctgagctc tggggagcct
1140
gtagactaca acgtggatat tggcatcccc ttggatggag aaacagagga gctgtgaggt
1200
gtttctcct ctgatttga tcatctcccc tctctggctc caatttggag agggaaatgct
1260
gagcagatag ccccatgtt taatccagta tccttatggg aatggaggga aaaaggagag
1320
atctaccttt ccacccctta ctccaagtcc cactccacg catccttctt caccaactca
1380
gagctccct tctacttgct ccatatggaa cctgctcgtt tatggaattt gctctgccac
1440
cagtaacagt caataaactt caaggaaaat gaactcatc ttcctttgat atttgagagc
1500
agatgaaagc cgagg
1515

gtcacacatt tcaataaagc attttcaaga ctgttgaaaa aaaaaaaaaa aaaaaaaaaa
 3060
 aaaaaaaaaa aaaaaaaaaa
 3078

<210> 5594
 <211> 296
 <212> PRT
 <213> Homo sapiens

<400> 5594

Met	Gly	Tyr	Thr	Glu	Thr	Ser	Leu	Gln	Glu	His	Val	Thr	Ser	Glu	His
1				5					10					15	
Ala	Glu	Thr	Ser	Thr	Glu	Val	Ile	Cys	Pro	Ile	Cys	Ala	Ala	Leu	Pro
			20					25					30		
Gly	Gly	Asp	Pro	Asn	His	Val	Thr	Asp	Asp	Phe	Ala	Ala	His	Leu	Thr
		35					40					45			
Leu	Glu	His	Arg	Ala	Pro	Arg	Asp	Leu	Asp	Glu	Ser	Ser	Gly	Val	Arg
		50					55					60			
His	Val	Arg	Arg	Met	Phe	His	Pro	Gly	Arg	Gly	Leu	Gly	Gly	Pro	Arg
65					70				75					80	
Ala	Arg	Arg	Ser	Asn	Met	His	Phe	Thr	Ser	Ser	Ser	Thr	Gly	Gly	Leu
			85						90					95	
Ser	Ser	Ser	Gln	Ser	Ser	Tyr	Ser	Pro	Ser	Asn	Arg	Glu	Ala	Met	Asp
			100					105					110		
Pro	Ile	Ala	Glu	Leu	Leu	Ser	Gln	Leu	Ser	Gly	Val	Arg	Arg	Ser	Ala
		115					120					125			
Gly	Gly	Gln	Leu	Asn	Ser	Ser	Gly	Pro	Ser	Ala	Ser	Gln	Leu	Gln	Gln
		130					135					140			
Leu	Gln	Met	Gln	Leu	Gln	Leu	Glu	Arg	Gln	His	Ala	Gln	Ala	Ala	Arg
145					150				155					160	
Gln	Gln	Leu	Glu	Thr	Ala	Arg	Asn	Ala	Thr	Arg	Arg	Thr	Asn	Thr	Ser
			165						170					175	
Ser	Val	Thr	Thr	Thr	Ile	Thr	Gln	Ser	Thr	Ala	Thr	Thr	Asn	Ile	Ala
			180					185					190		
Asn	Thr	Glu	Ser	Ser	Gln	Gln	Thr	Leu	Gln	Asn	Ser	Gln	Phe	Leu	Leu
		195					200					205			
Thr	Arg	Leu	Asn	Asp	Pro	Lys	Met	Ser	Glu	Thr	Glu	Arg	Gln	Ser	Met
		210				215					220				
Glu	Ser	Glu	Arg	Ala	Asp	Arg	Ser	Leu	Phe	Val	Gln	Glu	Leu	Leu	Leu
225					230					235				240	
Ser	Thr	Leu	Val	Arg	Glu	Glu	Ser	Ser	Ser	Ser	Asp	Glu	Asp	Asp	Arg
			245						250					255	
Gly	Glu	Met	Ala	Asp	Phe	Gly	Ala	Met	Gly	Cys	Val	Asp	Ile	Met	Pro
		260					265						270		
Leu	Asp	Val	Ala	Leu	Glu	Asn	Leu	Asn	Leu	Lys	Glu	Ser	Asn	Lys	Gly
		275					280						285		
Asn	Glu	Pro	Pro	Pro	Pro	Pro	Leu								
		290					295								

<210> 5595
 <211> 1515
 <212> DNA
 <213> Homo sapiens

cttctagcag gtaaattgtag gtagcagtc aggggtgatc tctgcttcct gtaccttgac
1440
atgcaaaagg ctctcctaact actccacatt caaactgaag aggaaaattg aaatctctaa
1500
tgaagctgct gtgtgtattt atgaatatta atgaataaaa actgcttgga tggtttacct
1560
taactactgc atgaggtttt ttgcagcgtg catgagtttt agtgaccttg ttatttaaga
1620
agttaaatac aaggagtaaa acttaaaaaa aaaatacaaa gcccaaagct ttcccaaca
1680
ttattcaatg gttacacgac gaagtagctt ttgaataatg tctgcctgaa tcacctttct
1740
ttgtgtgcct cctacgcaca aagccagctc tgcagtggaa tctggggatt atagccgggt
1800
gtggcactcc gccctgtgtg actgtcctgt cgccctgtta gtcactttgc ctgtgtggag
1860
ctcagcctgt ctctttaact catctgtaga agacacacca gtaaagctac tgttgaatc
1920
tgctgcaggg gcccttgtgt gccctaaaaa caaatcctgt tcatgtttgt ttaaagtttt
1980
tactttttgt ggttgtttta aattttttca attgttaa atgttttatt caggtgtaga
2040
tgaatttcac ttattgactg ttcaacagag ttaacctgaa ttatgttgc tttgtttta
2100
aaaatctcac attctcaatc atattttgca ttatttatgt atttgcttg tagtttgcg
2160
agacagatca gtatcagggg agctttgagg atttgccctc ccagatttgt cagtatatta
2220
caaccaaatt cttaatgcta attttagcac cttttattta ttgggttttt tctggcataa
2280
aaagtaaagc cttttaattg aatcatgcc cctatatgcc tatattatta atcctatgtg
2340
taaaaaaat gtacagcttt ttttgggttt gttttgggtt ttggaagggc cgggttattt
2400
tttttttctt gtttcagttt ttgtgcatag actttcaca tagctccaag gcaggacag
2460
cgggtttggg ggttgggagg gcagtttttg gaatgtaa ttaggacttt taaaagggtg
2520
cgcacagctt ctgataaatt tataactaga cttaacctaa tcatgtctcg ttccagttct
2580
cttttctctg agcccttttc aaagtctcct ctctttctcc tgtcatcctt ttcctttcct
2640
gtccgtgtat ctccgtttct tcaacatgac aagcatacag acttgaacac cctccgggtg
2700
ttcttccgag aactgtgaag tccatgttca tccaaatga accaaaaag aagtcaccct
2760
acatgtctga aaaactgttg cttctcctct gaaacttcaa actccaacga tttccaaata
2820
caatagcttt gttttcttta gttctgtaat ggataatgtt taaaggaaaa ctttacacca
2880
ggcttctggt tacactagaa gtcaagccca ttagggattt tcattttttt tcatttggtt
2940
gttgagaagt ttcaaaaatc agttttcaag ctgtggtcct tcaaacacat ctgcacataa
3000

580

<210> 5593

<211> 3078

<212> DNA

<213> Homo sapiens

<400> 5593

nggacactgc agccggagtc cgggaggggc cgcgccgcca ccgtctgaac taggatgtcc
60
cgacatgaag gtgtcagctg tgatgcatgt ttaaaaggaa attttcgagg tcgcagatat
120
aagtgtttaa tttgctacga ttacgatctt tgtgcatctt gttatgaaag tgggtgaaca
180
acaacaaggc atacaactga ccaccaatg cagtgcataat taacaagggt agattttgat
240
ttatactatg gtggggaagc tttctctgta gagcagccac agtcttttac ttgtccctat
300
tgtggaaaaa tgggctatac ggagacatct cttcaagaac atgttacttc tgaacatgca
360
gaaacatcaa cagaagtgat ttgtccaata tgtgcagcgt tacctggagg cgatccta
420
catgtcacgg atgactttgc agctcatctt acacttgaac acagagcccc tagagattta
480
gatgaatcga gtggtgttcg acatgtacgt agaattgttc accctggccg gggattagga
540
ggtcctcgtg ctctgtagtc aaacatgcac tttactagca gttctactgg tggactttct
600
tcttctcaga gttcatattc tccaagcaat agggaagcca tggatcctat agctgagctt
660
ttatctcagt tatcaggagt gagacgttct gcaggaggac agcttaattc ctctggccct
720
tccgtttctc agttacaaca actgcagatg cagctgcagc tagaacggca gcatgcccag
780
gcagcacggc aacaactgga gaccgcacgc aacgcaaccc ggcgtactaa cacaagcagt
840
gtcaccacta caatcacaca atccacagca acaaccaaca tagctaatac agaaagcagt
900
cagcagactc tacagaattc ccagtttctt ttaacaagggt tgaatgatcc taaaatgtct
960
gaaacggagc gccagtccat ggaaagcgag cgtgcagacc gcagcctggt tgtccaagag
1020
ctccttctgt ccactttagt gcgtgaagag agctcatcct cagatgagga tgatcggggg
1080
gagatggcag attttgggtgc tatgggctgt gtagatatta tgcctttaga tgttgcttta
1140
gaaaacctaa atttaaaaga gagtaataaa ggaaatgagc ctccaccacc tcctctttga
1200
tgacatccca attcgcagac aatgtcctct gtgctgtatt tgccaatgaa agtggaaca
1260
aactatcttg ggtttgtttg gtgattgtaa tttcaggtct gtcactcttg ttacattgtg
1320
tacattcaaa aggaagagag aaaatatata tgataatcat ttccacttaa ctaattttta
1380

145		150		155		160
Asp Thr Asp His Tyr Phe Leu Arg Tyr Ala Val Leu Pro Arg Glu Val						
	165		170		175	
Val Cys Thr Glu Asn Leu Thr Pro Trp Lys Lys Leu Leu Pro Cys Ser						
	180		185		190	
Ser Lys Ala Gly Leu Ser Val Leu Leu Lys Ala Asp Arg Leu Phe His						
	195		200		205	
Thr Ser Tyr His Ser Gln Ala Val His Ile Arg Pro Val Cys Arg Asn						
	210		215		220	
Ala Arg Cys Thr Ser Ile Ser Trp Glu Leu Arg Gln Thr Leu Ser Val						
225		230		235		240
Val Phe Asp Ala Phe Ile Thr Gly Gln Gly Lys Lys Asp Trp Ser Leu						
	245		250		255	
Phe Arg Met Phe Ser Arg Thr Leu Thr Glu Pro Cys Pro Leu Ala Ser						
	260		265		270	
Glu Ser Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln Pro Cys Leu						
	275		280		285	
Cys Val Gln Asp Asn Glu Thr Leu Glu Val His Pro Pro Pro Thr Thr						
	290		295		300	
Thr Tyr Gln Asp Val Ile Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr						
305		310		315		320
Asp Leu Leu Asp Thr Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile						
	325		330		335	
Gln Leu Lys Trp Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val Pro						
	340		345		350	
Phe Leu His Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln Lys Gly						
	355		360		365	
Glu Leu Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg Ala Phe Pro						
	370		375		380	
Val Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg Leu Tyr Val His						
385		390		395		400
Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn Lys Pro Ser Tyr Ile						
	405		410		415	
His Tyr Gln Pro Ala Gln Asp Arg Leu Gln Pro His Leu Leu Glu Met						
	420		425		430	
Leu Ile Gln Leu Pro Ala Asn Ser Val Thr Lys Val Ser Ile Gln Phe						
	435		440		445	
Glu Arg Ala Leu Leu Lys Trp Thr Glu Tyr Thr Pro Asp Pro Asn His						
	450		455		460	
Gly Phe Tyr Val Ser Pro Ser Val Leu Ser Ala Leu Val Pro Ser Met						
465		470		475		480
Val Ala Ala Lys Pro Val Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser						
	485		490		495	
Leu Phe Pro Val Ser Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr						
	500		505		510	
Glu Pro Leu Leu Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr						
	515		520		525	
Asn Val Ile Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser						
	530		535		540	
Phe Tyr Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr						
545		550		555		560
Gly Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly						
	565		570		575	
Val Pro Pro Leu						

acaccagatc ctaaccatgg cttctatgtc agcccatctg tcttcagcgc ccttgtgccc
 1440
 agcatggtag cagccaagcc agtggactgg gaagagagtc ccctcttcaa cagcctgttc
 1500
 ccagtctctg atggctctaa ctactttgtg cggctctaca cggagccgct gctggtgaac
 1560
 ctgccgacac cggacttcag catgccctac aacgtgatct gcctcacgtg cactgtgggtg
 1620
 gccgtgtgct acggctcctt ctacaatctc ctcacccgaa ccttcacat cgaggagccc
 1680
 cgcacagggtg gcctggccaa gcggctggcc aaccttatcc ggcgcgccc aggtgtcccc
 1740
 ccactctgat tcttgccctt tccagcagct gcagctgccg tttctctctg gggaggggag
 1800
 cccaagggct gtttctgcc a ttgctctcc tcagagtggg cttttgaacc aaagtgcctt
 1860
 ggaccagggtc agggcctaca gctgtgttgt ccagtacagg agccacgagc caaatgtggc
 1920
 atttgaattt gaattaactt agaaattcat ttcctcacct gtagtggcca cctctatatt
 1980
 gaggtgctca ataagcaaaa gtggtcgggtg gctgctgtat tggacagcac agaaaaagat
 2040
 ttccatcacc acagaaaggt cggctggcag cactggccaa ggtgatgggg tgtgctacac
 2100
 agtgtatgtc actgtgtagt ggatggagtt tactgtttgt ggaataaaaa cggctgtttc
 2160
 cgtgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 2194

<210> 5592

<211> 580

<212> PRT

<213> Homo sapiens

<400> 5592

Met Pro Ser Gly Ser Ala Arg Pro Val Ala Pro Gly Ala Arg Arg Leu
 1 5 10 15
 Val Pro Cys Arg Thr Pro Thr Arg Gln Leu Arg Glu Glu Leu Val Ile
 20 25 30
 Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln Phe Arg Thr
 35 40 45
 Arg Trp Asp Ser Asp Leu Gln Arg Glu Gly Val Ser His Tyr Arg Leu
 50 55 60
 Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys Tyr Ser Leu Arg Glu
 65 70 75 80
 Leu His Leu Ser Phe Thr Gln Gly Phe Trp Arg Thr Arg Tyr Trp Gly
 85 90 95Pro Phe Leu
 Gln Ala Pro Ser Gly Ala Glu Leu Trp Val Trp Phe
 100 105 110
 Gln Asp Thr Val Thr Asp Val Asp Lys Ser Trp Arg Glu Leu Ser Asn
 115 120 125
 Val Leu Ser Gly Ile Phe Cys Ala Ser Leu Asn Phe Ile Asp Ser Thr
 130 135 140
 Asn Thr Val Thr Pro Thr Ala Ser Phe Lys Pro Leu Gly Leu Ala Asn

195

200

205

<210> 5591

<211> 2194

<212> DNA

<213> Homo sapiens

<400> 5591

gcggtatgc cgtctggctc tgcctgcctc gttgctcctg gggcccggcg gctgggtgcct
60
tgcagaaccc ccacgcgaca gctgcgggag gaacttgtca tcaccccgct gccttcggg
120
gacgtagccg ccacattcca gttccgcacg cgttgggatt cggatctgca ggggaagga
180
gtgtccatt acaggtctt ccctaaagcc ctgggacagc tgatctcaa gtattctcta
240
cgggagctcc acctgtcatt cacgcaaggc ttttgaggga cccgatactg ggggccaccc
300
ttctgcagg ctccgtcagg tgcagagctc tgggtctggt tccaagacac tgtcactgat
360
gtggataagt cctggaggga gctcagtaat gtcctctcag ggatcttctg cgcctctctc
420
aacttcacg actccaccaa cacagtcact cccactgcct ccttcaaacc cctgggtctg
480
gccaatgaca ctgaccacta ctttctgcgc tatgctgtgc tgccgcggga ggtgggtctg
540
accgaaaacc tcacccctg gaagaagctc ttgccctgta gttccaaggc aggcctctct
600
gtgctgctga aggcagatcg cttgttccac accagctacc actcccaggc agtgcatac
660
cgccctgttt gcagaaatgc acgctgtact agcatctcct gggagctgag gcagacctg
720
tcagttgtat ttgatgcctt catcacgggg cagggaaga aagactggtc cctcttcgg
780
atgttctccc gaacctcac ggagccctgc cccctggctt cagagagccg agtctatgtg
840
gacatcacca cctacaacca gccctgcctt tgtgtccagg acaacgagac attagaggtg
900
caccacccc cgaccactac atatcaggac gtcactctag gcaactcgaa gacctatgcc
960
atctatgact tgcttgacac cgccatgatc aacaactctc gaaacctcaa catccagctc
1020
aagtgaaga gacccccaga gaatgaggcc ccccgagtgc ccttctgca tgcccagcgg
1080
tacgtgagtg gctatgggct gcagaagggg gagctgagca cactgctgta caacacccc
1140
ccataccggg ccttcccggt gctgctgctg gacaccgtac cctggatatct gcggctgtat
1200
gtgcacaccc tcaccatcac ctccaaggc aaggagaaca aaccaagtta catccactac
1260
cagcctgccc aggaccggct gcaacccac ctctggaga tgctgattca gctgccggcc
1320
aactcagtca ccaaggtttc catccagttt gagcgggccc tgctgaagtg gaccgagtac
1380

aggatagcca gacagtggac caagagatac gcaacataat tcacataatt tgtatgcagt
 780
 gtgaaggagc agaaggcatc ttctcactgt gctgcaaatac tttatagcct ttacaatacg
 840
 gacttctgtg tatatgttat actgattcta ctctgctttt atccttttga gcctgggaga
 900
 ctccccaaaa aggtaaatgc tatcaagagt agaactttgt agctgtagat tagttatgtt
 960
 taaaacgcct acttgcaagt cttgcttctt tgggatatca aaatgtattt tgtgatgtac
 1020
 taaggatact ggtcctgaag tctaccaaatt attatagtgc atttttagcct aattcattat
 1080
 ctgtatgaag ttataaaaagt agctgtagat ggctaggaat tatgtcattt gtattaaacc
 1140
 cagatctatt tctgagtatg tggttcatgc tgttggtgaaa aatgttttac cttttacctt
 1200
 tgtcagtttg taatgagagg atttcctttt acccttttga gctcagagag cacctgatgt
 1260
 atcatctcaa acacaataaaa catgctcctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1320
 aaaaaaa
 1327

<210> 5590

<211> 207

<212> PRT

<213> Homo sapiens

<400> 5590

Met	Ser	Ser	Asp	Arg	Gln	Arg	Ser	Asp	Asp	Glu	Ser	Pro	Ser	Thr	Ser
1				5					10					15	
Ser	Gly	Ser	Ser	Asp	Ala	Asp	Gln	Arg	Asp	Pro	Ala	Ala	Pro	Glu	Pro
			20					25					30		
Glu	Glu	Gln	Glu	Glu	Arg	Lys	Pro	Ser	Ala	Thr	Gln	Gln	Lys	Lys	Asn
		35					40					45			
Thr	Lys	Leu	Ser	Ser	Lys	Thr	Thr	Ala	Lys	Leu	Ser	Thr	Ser	Ala	Lys
	50					55					60				
Arg	Ile	Gln	Lys	Glu	Leu	Ala	Glu	Ile	Thr	Leu	Asp	Pro	Pro	Pro	Asn
65					70					75					80
Cys	Ser	Ala	Gly	Pro	Lys	Gly	Asp	Asn	Ile	Tyr	Glu	Trp	Arg	Ser	Thr
			85					90					95		
Ile	Leu	Gly	Pro	Pro	Gly	Ser	Val	Tyr	Glu	Gly	Gly	Val	Phe	Phe	Leu
		100					105					110			
Asp	Ile	Thr	Phe	Ser	Ser	Asp	Tyr	Pro	Phe	Lys	Pro	Pro	Lys	Val	Thr
		115					120					125			
Phe	Arg	Thr	Arg	Ile	Tyr	His	Cys	Asn	Ile	Asn	Ser	Gln	Gly	Val	Ile
	130					135					140				
Cys	Leu	Asp	Ile	Leu	Lys	Asp	Asn	Trp	Ser	Pro	Ala	Leu	Thr	Ile	Ser
145				150						155				160	
Lys	Val	Leu	Leu	Ser	Ile	Cys	Ser	Leu	Leu	Thr	Asp	Cys	Asn	Pro	Ala
			165					170					175		
Asp	Pro	Leu	Val	Gly	Ser	Ile	Ala	Thr	Gln	Tyr	Leu	Thr	Asn	Arg	Ala
		180					185					190			
Glu	His	Asp	Arg	Ile	Ala	Arg	Gln	Trp	Thr	Lys	Arg	Tyr	Ala	Thr	

```
<210> 5589
<211> 1327
<212> DNA
<213> Homo sapiens
```

```

<400> 5589
nncccccttc cccctcccac agctgcctcc atttcttaa ggaagggtt ttttctctt
60
ccctccccca caccgtagcg gcgcgcgagc gggccgggcg ggcggccgag ttttccaaga
120
gataacttca ccaagatgtc cagtgatagg caaagggtcg atgatgagag ccccagcacc
180
agcagtggca gttcagatgc ggaccagcga gaccagccg ctccagagcc tgaagaacaa
240
gaggaaagaa aaccttctgc ccccagcag aagaaaaaca ccaaactctc tagcaaaacc
300
actgctaagt tatccactag tgctaaaaga attcagaagg agctagctga aataaccctt
360
gatcctctc ctaattgcag tgctgggcct aaaggagata acatttatga atggagatca
420
actatacttg gtccaccggg ttctgtatat gaagggtggtg tgttttttct ggatatcaca
480
ttttcatcag attatccatt taagccacca aagggttactt tccgcaccag aatctatcac
540
tgcaacatca acagtcaggg agtcatctgt ctggacatcc ttaaagacaa ctggagtccc
600
gctttgacta tttcaaagg tttgctgtct atttgttccc ttttgacaga ctgcaaccct
660
gcggatctc tggttgaag catagccact cagtatttga ccaacagagc agaacacgac
720

```

35 40 45
 Ser Ser Lys Leu Leu Cys Ser Met Thr Ala Ala Cys Pro Thr Leu Ser
 50 55 60
 Leu Leu Asp Leu Gln Leu Arg Leu Arg Arg Glu Val Gly Glu Gly His
 65 70 75 80
 Cys Pro Ile Leu Asp Leu Thr
 85

<210> 5587

<211> 853

<212> DNA

<213> Homo sapiens

<400> 5587

ttttttagag attagtattt ccttggtcac aagacaccta attgacttgc aacaagacaa
 60
 aatattcagt gcatctggtt ggggccaaca tggatgatga cgtgtttctc ataagccctt
 120
 ttcattgttt tctcaatttg cttcagaaaa acttgcgagg ttcgtccaca taaagtgtgc
 180
 acagtctcca aaaacttcag ctgaaggggg taatacatgg attgaaagag attgtcttga
 240
 aagggaaaat cccgtattgc ttcataagat gctctgaacg ttggttgctt atcgtcatgg
 300
 tagacgctc gggttccatg cagaacagac acacctcat gctcagcctc tctgcagttg
 360
 cttccgtaca tgcagtgatc gggacggtag ttccactggc aggggaatac atagagacac
 420
 tctgggttga aataaaaaat aatatttaat aaatcctggt ctccccacgt gatggcattc
 480
 ttgtacttct ggtacagagg gtacaacatg tcttccaag ccaggcctgt tggaatcatg
 540
 ctgttcttga actgggtact tcttatccga gttaaattca ttaacatgac tctgaatta
 600
 actcctgcag agccatagaa aggatgccta gcaaagcggc tgtaccagcc aatcttgggg
 660
 atttcgtgct caggggccat ggctgcaagc tgggtggaat taaacagcct cagaagcttc
 720
 cagatgtcat caacaggtct cagaaagagg acatcgggtg ccacgtagag aagtgagtcc
 780
 acatccttta aaatcacggg aagaaagagt ctctgggcag cacagggttt gaacaatttc
 840
 ttccactcct gag
 853

<210> 5588

<211> 204

<212> PRT

<213> Homo sapiens

<400> 5588

Met Ala Pro Glu His Glu Ile Pro Lys Ile Gly Trp Tyr Ser Arg Phe
 1 5 10 15
 Ala Arg His Pro Phe Tyr Gly Ser Ala Gly Val Asn Ser Gly Val Met

```

385          390          395          400
Glu His Met Ala Gln Gln Asp Pro Gly Leu Pro Phe Leu Phe Trp Phe
          405          410          415
Ser Val Ala Ser Leu Ile Thr Leu Phe His Leu Phe Leu Phe Lys Leu
          420          425          430
Ile Tyr Asn Glu Tyr Cys Gly Pro Gly Ala Lys Pro Leu Phe Arg Ser
          435          440          445
Lys Glu Asp Pro Ser Val
          450

```

<210> 5585

<211> 740

<212> DNA

<213> Homo sapiens

<400> 5585

```

tttttttttt gctttttttt ttttttttta ctttgaacat tagcattaag ttggttaccg
60
tacacatcca aaggcccagc atctcagaaa aatcattagg cggcacacct gtaccagagt
120
ctcacaagaa taaaatatac aatgctacat tgagtgggta aaaatacaca aaaaagtagt
180
ttaacaatc tataaatatt ttatacttaa aatcatgatt gagttgaaat aaaaaagtg
240
atttcaattg ctaaaaaaat aatatcggtg tagttaacac aaggggggaaa tcagtacatt
300
gagggatctg acaggatgct ggaaaaaatg actcagggaa gccgggcagc atgggctcct
360
ttggagattc aggagcggag ctcaagtcca cctcactgca gttccctggg gccaaagcagc
420
cctcctctcc ccagtatctt tcccatctta agagatcctg tctacctac ctgtcacctc
480
cccaacccaa agactcctct aaacttcttt gcagcatgac agctgctgc cctacactga
540
gtctacttga ctttcaattg cgtctccgca gagaggtagg agagggacac tgccccattc
600
tggacttgac ataagtaccc cagccacatg gccttcatcc ttatgaccta gcaggcagaa
660
cagggaccaaa gcagcttcta ttttgtcaaa ctccttttga caaatattca acattcaaca
720
acaagctttg taaacctaac
740

```

<210> 5586

<211> 87

<212> PRT

<213> Homo sapiens

<400> 5586

```

Met Gly Ser Phe Gly Asp Ser Gly Ala Glu Leu Ser Ser Thr Ser Leu
1          5          10          15
Gln Phe Pro Gly Ala Lys Gln Pro Ser Ser Pro Gln Tyr Leu Ser His
          20          25          30
Leu Lys Arg Ser Cys Pro Thr Tyr Leu Ser Pro Pro Gln Pro Lys Asp

```


<211> 454

<212> PRT

<213> Homo sapiens

<400> 5584

```

Xaa Gly Arg Asp Cys Val Leu Leu Gln Glu Asp Phe Leu Ala His Arg
 1           5           10           15
Gly Arg Pro His Val Tyr Leu Gln Arg Ile Gln Leu Asn Asn Pro Thr
      20           25           30
Glu Arg Val Ala Ala Leu Gln Thr Val Gly Pro Thr Ala Gly Pro Ala
      35           40           45
Pro Asn Ala Phe Thr Ser Thr Leu Glu Lys Val Gly Asp His Gln Phe
      50           55           60
Leu Leu Tyr Ser Gly Arg Ser Pro Pro Thr Pro Thr Gly Leu Val His
      65           70           75           80
Leu Val Val Val Ala Lys Lys Leu Val Asn Arg Leu Gln Val Ala
      85           90           95
Pro Lys Thr Gln Leu Asp Glu Thr Val Leu Trp Val Val His Val Ser
      100          105          110
Gly Pro Ile Asn Pro Gln Val Leu Lys Ser Lys Ala Ala Lys Glu Leu
      115          120          125
Lys Ala Leu Gln Asp Leu Ala Arg Lys Glu Met Leu Glu Leu Leu Asp
      130          135          140
Met Pro Ala Ala Glu Leu Leu Gln Asp His Gln Leu Leu Trp Ala Gln
      145          150          155          160
Leu Phe Ser Pro Gly Val Glu Met Lys Lys Ile Thr Asp Thr His Thr
      165          170          175
Pro Ser Gly Leu Thr Val Asn Leu Thr Leu Tyr Tyr Met Leu Ser Cys
      180          185          190
Ser Pro Ala Pro Leu Leu Ser Pro Ser Leu Ser His Arg Glu Arg Asp
      195          200          205
Gln Met Glu Ser Thr Leu Asn Tyr Glu Asp His Cys Phe Ser Gly His
      210          215          220
Ala Thr Met His Ala Glu Asn Leu Trp Pro Gly Arg Leu Ser Ser Val
      225          230          235          240
Gln Gln Ile Leu Gln Leu Ser Asp Leu Trp Arg Leu Thr Leu Gln Lys
      245          250          255
Arg Gly Cys Lys Gly Leu Val Lys Val Gly Ala Pro Gly Ile Leu Gln
      260          265          270
Gly Met Val Leu Ser Phe Gly Gly Leu Gln Phe Thr Glu Asn His Leu
      275          280          285
Gln Phe Gln Ala Asp Pro Asp Val Leu His Asn Ser Tyr Ala Leu His
      290          295          300
Gly Ile Arg Tyr Lys Asn Asp His Ile Asn Leu Ala Val Leu Arg Met
      305          310          315          320
Pro Arg Ala Ser Pro Thr Tyr Thr Cys Pro Trp Ser Pro Val Ala Ser
      325          330          335
Leu Ser Xaa Ile Tyr Ala Cys Lys Ala Gly Cys Leu Asp Glu Pro Val
      340          345          350
Glu Leu Thr Ser Ala Pro Thr Gly His Thr Phe Ser Val Met Val Thr
      355          360          365
Gln Pro Ile Thr Pro Leu Leu Tyr Ile Ser Thr Asp Leu Thr His Leu
      370          375          380
Gln Asp Leu Arg His Thr Leu His Leu Lys Ala Ile Leu Ala His Asp

```

tccctgagcc acagggagcg agaccagatg gagtcgacgc tcaactatga agatcactgc
660
ttcagcgggc acgccaccat gcacgccgag aacctgtggc cggggcggct gtcctccgtc
720
cagcagatcc tgcagctctc tgacctgtgg aggttgaccc tccagaagcg tggctgcaag
780
gggctgggtga aggtgggtgc cccaggcatc ctgcagggga tgggtgtcag ctttgggggg
840
ctgcagttca cagagaacca cctccagttc caggccgacc ccgacgtgct gcacaacagc
900
tatgcattgc atggcatccg ctacaagaac gaccatatca acctggccgt gctgcggatg
960
ccgagggcaa gccctaccta cacgtgtccg tggagtcccg tggccagcct gtcanaagtc
1020
tatgcctgca aggcaggctg cctggacgag ccagtggagc tgacctcggc gccacgggc
1080
cacaccttct cggtcattgt gacacagccc atcacgccac tgctctacat ctccaccgac
1140
ctcacacacc tgcaggacct gcggcacacg ctgcacctca aggccatcct ggcccatgat
1200
gagcacatgg cccagcagga ccccgggctg cccttctct tctgggttcag cgtggcctcc
1260
ctaatacccc tcttccacct ctctctcttc aagctcatct acaacgagta ctgtgggcct
1320
ggagccaagc ccctcttcag gagtaaggaa gatcccagtg tctgagtga ctaacagtcc
1380
tgctttcagc caccatttgc acaagacacc cagcactgaa agtcccgtg ccaggagcaa
1440
gggatccctt ggaagcacc gccctttgtg ccttggtggg ggaaaccggt gacgcagaag
1500
tgagtgtgga tacaccagag tttgcattgg aaggaatgag tgtcacgtgg ggagggaagg
1560
ggccagtgga ccttttgtaa gctttccact caataaaatg aacctgtatg gcaaatactt
1620
gaaatggaac tcaactcttc cactttcccc ctttcttctg tcccaggaaa tagatcatct
1680
tttgaaaaga ctcttgtcta ggaaaagttg tgtccttttc ctaatttaac gtgttctttc
1740
ttaatgaagt ttaatttat tttgttgag attttgctag atggcttttg catcccctgt
1800
agatggtgag tgttggcggg gatgtccgtc tcggcggtcg gaggccccac ggtcccagg
1860
ctgggcccgg gcccccagg gtggctgtgc tgctgcctgt aggaggggtgc gggttgtgct
1920
gtcatcctcg ggtttgacg ccctttttta ggagcctgtg gacatctgtg gttttgtact
1980
ttggggcttc aggggaggtg ttttaacttc tagtgattga tgattgtcag gttttgaaat
2040
accaagctt ttttgttctg tttttaata aatatcttcc aaactttaaa aaaaaaaaaa
2100
a
2101

<210> 5584

1	5	10	15
Ser Cys Ser Thr Asp Ser Ser Phe Thr Arg Thr Pro Val Pro Thr Val			
	20	25	30
Ser Leu Ala Ser Arg Glu Leu Pro Val Ser Ser Trp Gln Val Thr Glu			
	35	40	45
Pro Ser Ser Lys Asn Leu Trp Glu Gln Ile Cys Lys Glu Tyr Glu Ala			
	50	55	60
Glu Gln Pro Pro Phe Pro Glu Gly Tyr Lys Val Lys Gln Glu Pro Val			
65	70	75	80
Ile Thr Val Ala Pro Val Glu Glu Met Leu Phe His Gly Phe Ser Ala			
	85	90	95
Glu His Tyr Phe Pro Val Ser His Phe Thr Met Ile Ser Arg Thr Pro			
	100	105	110
Cys Pro Gln Asp Lys Ser Glu Thr Ile Asn Pro Lys Thr Cys Ser Pro			
	115	120	125
Lys Glu Tyr Leu Glu Thr Phe Ile Phe Pro Val Leu Leu Pro Gly Met			
	130	135	140
Ala Ser Leu Leu His Gln Ala Lys Lys Glu Lys Cys Phe Glu Val Ser			
145	150	155	160
Cys Leu Ala Gly Phe Leu Tyr Phe Glu Ile Leu Asn His Ser Leu Leu			
	165	170	175
Ser Asp Asp Ser Ser Leu Ser Trp Tyr His Gln Val Val Leu Gln Met			
	180	185	190
Thr Pro Ser Gly Gly Lys Ala Cys Val Trp Gly His Leu Pro Ser Ser			
	195	200	205
Ser His Thr Ile			
210			

<210> 5583

<211> 2101

<212> DNA

<213> Homo sapiens

<400> 5583

```

nnaggccgcg actgcgtgct gctgcaagag gactttctg cgcacagggg ccgacccac
60
gtctacctgc agcgcatcca gctcaacaac cccacggagc gcgtggccgc gctgcagact
120
gtggggccca ctgccggccc agcccccaat gccttcacca gtaccctgga gaaggtcgga
180
gaccatcagt tcctcctcta ctccaggcgg tccccgccta cgcacctgg gttggtgcac
240
ctggtggtgg tggccgcca gaagctggtg aaccgcctcc aagtggctcc caagacgcag
300
ctggatgaga cgggtgctgtg ggtggtgcac gtctctggcc ccattaaccc ccaggtgctc
360
aaaagcaaag cagccaagga gctcaaggcg ctgcaggact tggcacggaa ggaaatgctg
420
gagctcttgg acatgccagc ggcggagctg ctccaagacc accagctcct ctgggctcag
480
ctcttcagcc caggagtggg aatgaagaag atcactgaca cccacacgcc gtctggcctc
540
accgtgaacc tgacgtctta ttacatgtct tctgtctgc cagccccact gctcagcccc
600

```

```
<210> 5581
<211> 720
<212> DNA
<213> Homo sapiens
```

```
<210> 5582
<211> 212
<212> PRT
<213> Homo sapiens
```

4763

ttagcacgcg ttcagagtca aaatggcata gtactgtcat ggagtgtcct ggaggtggat
 600
 cgaagctgtg ccaactgttg tagctacat ctctatgctt accatgagga acccagtgcc
 660
 actgtgccct cacaatggaa aaagattggg gaagtcaagg cacttccctt gcccatggca
 720
 tgtactctca cccagtttgt atctggtagc aaatactact ttgcagtacg agccaaggat
 780
 atttatggac gttttgggcc tttctgtgat cctcagtcaa cagatgtgat ctcttctacc
 840
 cagagcagtt aaaccttgga gcctttatat tttctcttt taaaatttcc accttttggg
 900
 cttgttttta atcttgtgca tgatacccca tgtaaaatcc accttgtgca agatttcttg
 960
 gacagatgtg tgtatacact acatttgttt ataaccagaa gcaaaataaa ctcagccac
 1020
 aaagctagaa tcttttcctg gacagtttag gctttggggg ttggaaatgt aaatgtgtac
 1080
 cttgcttttag ttttgaggct ggggaatatg tgtgggtgtt tatgtgtgtt tttccttatg
 1140
 taggtgttat tgcattggag tctccattt tcattctcaa atttacctt taaagtacga
 1200
 agtaagtaga tcaaaggatt tgagatgtgt aactggcatg attctgcttt tgaaggatct
 1260
 atagtatcat tttagttaag tgggtcaaac agaatacaaaa caaaacccaa ag
 1312

<210> 5580

<211> 283

<212> PRT

<213> Homo sapiens

<400> 5580

Thr	Pro	Val	Ser	Thr	Met	Ser	Ser	Ser	Gln	Pro	Val	Ser	Arg	Pro	Leu
1				5					10					15	
Gln	Pro	Ile	Gln	Pro	Ala	Pro	Pro	Leu	Gln	Pro	Ser	Gly	Val	Pro	Thr
		20						25					30		
Ser	Gly	Pro	Ser	Gln	Thr	Thr	Ile	His	Leu	Leu	Pro	Thr	Ala	Pro	Thr
	35					40						45			
Thr	Val	Asn	Val	Thr	His	Arg	Pro	Val	Thr	Gln	Val	Thr	Thr	Arg	Leu
	50					55					60				
Pro	Val	Pro	Arg	Ala	Pro	Ala	Asn	His	Gln	Val	Val	Tyr	Thr	Thr	Leu
65					70					75					80
Pro	Ala	Pro	Pro	Ala	Gln	Ala	Pro	Leu	Arg	Gly	Thr	Val	Met	Gln	Ala
				85					90					95	
Pro	Ala	Val	Arg	Gln	Val	Asn	Pro	Gln	Asn	Ser	Val	Thr	Val	Arg	Val
			100					105						110	
Pro	Gln	Thr	Thr	Thr	Tyr	Val	Val	Asn	Asn	Gly	Leu	Thr	Leu	Gly	Ser
	115					120						125			
Thr	Gly	Pro	Gln	Leu	Thr	Val	His	His	Arg	Pro	Pro	Gln	Val	His	Thr
	130					135						140			
Glu	Pro	Pro	Arg	Pro	Val	His	Pro	Ala	Pro	Leu	Pro	Glu	Ala	Pro	Gln
145					150					155					160
Pro	Gln	Arg	Leu	Pro	Pro	Glu	Ala	Ala	Ser	Thr	Ser	Leu	Pro	Gln	Lys

<210> 5578
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 5578
 Leu His Ala Asp Lys Leu Trp Phe Cys Cys Leu Ser Pro Asn His Lys
 1 5 10 15
 Leu Leu Gln Tyr Gly Asp Met Glu Glu Gly Xaa Gln Pro Ala Tyr Pro
 20 25 30
 Xaa Glu Ser Leu Pro Glu Gln Leu Pro Val Ala Asp Met Arg Ala Leu
 35 40 45
 Leu Thr Gly Lys Asp Cys Pro His Val Arg Glu Lys Gly Ser Gly Lys
 50 55 60
 Gln Asn Lys Asp Leu Tyr Glu Leu Ala Phe Ser Ile Ser Tyr Asp Arg
 65 70 75 80
 Gly Glu Glu Glu Ala Tyr Leu Asn Phe Ile Ala Pro Ser Lys Arg Glu
 85 90 95
 Phe Tyr Leu Trp Thr Asp Gly Leu Ser Ala Leu Leu Gly Ser Pro Met
 100 105 110
 Gly Ser Glu Gln Thr Arg Leu Asp Leu Glu Gln Leu Leu Thr Met Glu
 115 120 125
 Thr Lys Leu Arg Leu Leu Glu Leu Glu Asn Val Pro Ile Pro Glu Arg
 130 135 140
 Pro Pro Pro Val Pro Pro Pro Thr Asn Phe Asn Phe Cys Tyr Asp
 145 150 155 160
 Cys Ser Ile Ala Glu Pro
 165

<210> 5579
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 5579
 actcctgtat caaccatgag ttcttctcag cctgtgtcac gaccattgca acccatacaa
 60
 ccagcaccgc ctcttcaacc atctgggggtg ccaacaagtg gaccatctca gaccaccata
 120
 cacttactac ctacagctcc aactaccgtg aatgtaacac atcgtccagt aactcaggtg
 180
 accacaagac tccctgtacc aagagctcct gcaaaccacc aggtggttta tacaactctt
 240
 cctgcaccac cagctcaggc tcccttgcca ggaactgtta tgcaggctcc tgctgttcgg
 300
 caggtcaatc cccaaaatag tgttacagtt cgagtgcctc aaacaaccac atatgttgta
 360
 aacaatggac taaccctggg atcaacagga cctcagctca cagtgcacat cgcaccacca
 420
 caagtgcata ctgagccccc acgccccgtg caccagcac ccttaccaga agctccacaa
 480
 ccacagcgtc tgccccccaga agctgccagc acatctctgc ctccagaagcc acatttgaag
 540

```
<210> 5577
<211> 659
<212> DNA
<213> Homo sapiens
```

4760

cttctgatgt taaaatgctg accagaacgc tcttgagccc aggcacgtt gagcattaac
 1740
 actctgtgac agagctgcag acccctgcct tgagtctcat ctcagcaatg ctgccaccct
 1800
 cttgtctttc agagttgtta gtttactcca ttctttgtga cagcagtcac gtggctcaca
 1860
 acctcctcag ggcaccagag gactcactca ctgggtgctg tgatgatata cagtgtccct
 1920
 ctgccccctt ccatcccca ccacatttga ctgtagcatt gcactctgtg cctgttgtca
 1980
 tttatgttaa ccttcaggta ttaaacttgc tgcatactt gacatatctt gagattctgc
 2040
 atgtcttgta aagagagggg atgtgcattt gtgtgtgatg ttggatagtc atccacgtc
 2100
 agtttgacc attggaggaa cttagtgtca cgcacaaatg gggctattcc tacgcttaga
 2160
 atagggttg tctgcccact ttagaagagt ccagggttgg gagcatttag agggaagcag
 2220
 ggcagaactc tgaacgacaa tacgtctctc tgagcagaga cccctttgtt cttgttatcc
 2280
 acccatatgg acttggaatc aatcttgcca aatatttga gagattgtgt ggatttaaga
 2340
 gacctggatt tttatatatt accagtaaat aaaagtttct attgatattc gtccttgaaa
 2400
 cttga
 2405

<210> 5576

<211> 367

<212> PRT

<213> Homo sapiens

<400> 5576

Met Ala Asp Phe Gly Ile Ser Ala Gly Gln Phe Val Ala Val Val Trp
 1 5 10 15
 Asp Lys Ser Ser Pro Val Glu Ala Leu Lys Gly Leu Val Asp Lys Leu
 20 25 30
 Gln Ala Leu Thr Gly Asn Glu Gly Arg Val Ser Val Glu Asn Ile Lys
 35 40 45
 Gln Leu Leu Gln Cys Leu Val Pro Gly Ser Thr Thr Leu His Ser Ala
 50 55 60
 Glu Ile Leu Ala Glu Ile Ala Arg Ile Leu Arg Pro Gly Gly Cys Leu
 65 70 75 80
 Phe Leu Lys Glu Pro Val Glu Thr Ala Val Asp Asn Asn Ser Lys Val
 85 90 95
 Lys Thr Ala Ser Lys Leu Cys Ser Ala Leu Thr Leu Ser Gly Leu Val
 100 105 110
 Glu Val Lys Glu Leu Gln Arg Glu Pro Leu Thr Pro Glu Glu Val Gln
 115 120 125
 Ser Val Arg Glu His Leu Gly His Glu Ser Asp Asn Leu Leu Phe Val
 130 135 140
 Gln Ile Thr Gly Lys Lys Pro Asn Phe Glu Val Gly Ser Ser Arg Gln
 145 150 155 160
 Leu Lys Leu Ser Ile Thr Lys Lys Ser Ser Pro Ser Val Lys Pro Ala

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcattgta ttcagactct
120
ttagcatata cagtagagtt tctaattgttgc ttagcattcc ctagtgggag gttacaagtt
180
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg
240
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga
300
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcatcc
360
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgttaaccgg caatgagggc
420
cgctgtctg tggaaaacat caagcagctg ttgcaatgtt tagtcccagg aagcaccact
480
ctgcacagtg ctgagatttt ggctgaaatc gcccgatcc ttcggcctgg tggatgtctt
540
tttctgaagg agccagtaga gacagctgta gataacaata gcaaagtga gacagcatct
600
aagctgtgtt cagccctgac tctttctggt cttgtggaag tgaaagagct gcagcgggag
660
cccctaacc ctgaggaagt acagtctgtt cgagaacacc ttggtcatga aagtgacaac
720
ctgctgtttg ttcagatcac aggcacacac ccaactttg aagtgggttc ttctaggcag
780
cttaagcttt ccatcaccaa gaagtcttct ccttcagtga aacctgtgtt ggacctgtt
840
gctgccaagc tgtggaccct ctccagcaac gatattggag acgacagcat gtgcatcttc
900
tgtggatgta gtttaactca ccgttggcct cttgagcatg tggtcagggt gaacatgatg
960
atcaacaaaa aggaggacag ggtggacacc ttctttaccc tggactccaa gtttctctc
1020
gaagcctgca gtcactttag cttttcatta gcagagacca cgactgtatc actcattgct
1080
ttgaacactc tccaggatct cattgactca gatgagctgc tggatccaga agatttgaag
1140
aagccagatc cagcttcctt gcgggctgct tcttgtgggg aagggaacaa gaggaaggcc
1200
tgtaagaact gcacctgttg ccttgcgtga gaactggaaa aagagaagtc aagggaacag
1260
atgagctccc aaccaagtc agcttgtgga aactgctacc tgggcgatgc cttccgctgt
1320
gccagctgcc cctaccttg gatgccagcc ttcaaacctg gggaaaagggt gcttctgagt
1380
gatagcaatc ttcattgatc ctaggagggt cctgacatgg gacctatctg ctctccagc
1440
caactcctgt cctcacatc ccaccatggt ggctcctccc acctcctctg gatttgttca
1500
ctctgagatc tgtttgcaga gtgggtgctt agcagacaga gtgaagctgg ctggggggca
1560
cagtgggtgt tagtgctgct gtgtatcaaa agaccaaggt attatgggac ctggtttcag
1620
aatgggatgg gtttcttcac ctcatgttaa gagaaggag tgtgtcctga agaagccctt
1680

<211> 312
 <212> PRT
 <213> Homo sapiens

<400> 5574

```

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn
 1          5          10          15
Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val
 20          25          30
Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu
 35          40          45
Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val
 50          55          60
Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys
 65          70          75          80
Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro
 85          90          95
Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly
 100         105         110
Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn
 115         120         125
Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro
 130         135         140
Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu
 145         150         155         160
Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro
 165         170         175
Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile
 180         185         190
Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu
 195         200         205
Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn
 210         215         220
Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val
 225         230         235         240
Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr
 245         250         255
Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu
 260         265         270
Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp
 275         280         285
Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His
 290         295         300
Lys Thr Ile Arg Arg Glu Leu Asn
305          310

```

<210> 5575
 <211> 2405
 <212> DNA
 <213> Homo sapiens

<400> 5575

```

ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
60

```

130

135

<210> 5573

<211> 1279

<212> DNA

<213> Homo sapiens

<400> 5573

naaaaaacagg tggaatccgg gctggagccg gagctccggc ggcgcgggtg gcggcacgtc
60
cctccagaca gtaccacagg cacctggagt accggcatcg gtcgctgtgg ccccccagtg
120
tccgtcagag cctaggggag cctgccctcc cgcgcctcgt cggggcccgg ccaggcacct
180
tggccgccgg cgcacggacg cgggcacgag cactagatca cggctgctgg acctcggcac
240
gttgacaaga tttctctggg gtaccgcgga ggattacttt gaatttcggg ggtcgcctgt
300
ggtctggcat atttagaact taagtctatt atttcgggca ccatgacttt gaggccttta
360
gaagactggt gcagggggat ggacatgaac cctcggaaag cgctattgat tgccggcatc
420
tcccagagct gcagtgtggc agaaatcgag gaggctctgc aggtcgggtt agctcccttg
480
ggggagtaca gactgcttgg aaggatgttc aggagggatg agaacaggaa agtagcctta
540
gtagggctta ctgcggagac tagtcacgcc ctggtcccta aggagatacc gggaaaaggg
600
ggtatctgga gattgatctt taagccccct gaccagata atacatTTTT aagcagatta
660
aatgaatttt tagcgggaga gggcatgaca gtgggtgagt tgagcagagc tcttggacat
720
gaaaatggct ccttagaccc agagcagggc atgatcccgg aaatgtgggc ccctatgttg
780
gcacaggcat tagaggctct tcagcctgcc ctgcaatgct tgaagtataa aaagctgaga
840
gtgttctcgg gcagggagtc tccagaacca ggagaagaag aatttggacg ctggatgttt
900
catactactc agatgataaa ggcgtggcag gtgccagatg tagagaagag aaggcgattg
960
ctagagagcc ttcgaggccc agcacttgat gttattcgtg tcctcaagat aaacaatcct
1020
ttaattactg tcgatgaatg tctgcaggct cttgaggagg tatttggggg tacagataat
1080
cctagggagt tgcagggtcaa atatctaacc acttaccaga aggatgagga aaagttgtcg
1140
gcttatgtac taaggctgga gcctttgtta cagaagctgg tacagagagg agcaattgag
1200
agagatgctg tgaatcaggc ccgcctagac caagtcattg ctggggcagt ccacaaaaca
1260
attcgcagag agcttaata
1279

<210> 5574

	100		105		110										
Val	Leu	Gln	Ala	Phe	Ile	Ser	Phe	Arg	Ala	Ala	Pro	Ser	Leu	Cys	Pro
	115		120		125										
Gly	Thr	Leu	Ala	Lys	Met	Gln	Cys	Leu	Pro	Asn	Ser	His	Ile	Ser	Phe
	130		135		140										
Asn	Gln	Gly	Ala	Ile	Pro	Ala	Trp	Lys	Ser	Pro	Ser	Cys	Ser	Cys	Trp
145			150		155									160	
Gln	Val	Gln	Val	Pro	Val	Cys	Asp	Gly							
			165												

<210> 5571

<211> 405

<212> DNA

<213> Homo sapiens

<400> 5571

```

aaccagaaag tggatctctt cagcctggga attatcttct ttgagatgtc ctatcacccc
60
atggtcacgg cttcagaaag gatctttgtt ctcaaccaac tcagagatcc cacttcgcct
120
aagtttccag aagactttga cgatggagag catgcaaagc agaaatcagt catctcctgg
180
ctgttgaacc acgatccagc aaaacggccc acagccacag aactgctcaa gaggtagctg
240
ctgccccac cccagatgga ggagtcagag ctgcatgaag tgctgcacca cacgctgacc
300
aacgtggatg ggaaggccta ccgcaccatg atggcccaga tcttctcgca gcgcctcgct
360
ggggcggggg gaggtggcta ccgctcccgg cttggcgctcc cgcgg
405

```

<210> 5572

<211> 135

<212> PRT

<213> Homo sapiens

<400> 5572

Asn	Gln	Lys	Val	Asp	Leu	Phe	Ser	Leu	Gly	Ile	Ile	Phe	Phe	Glu	Met
1			5						10					15	
Ser	Tyr	His	Pro	Met	Val	Thr	Ala	Ser	Glu	Arg	Ile	Phe	Val	Leu	Asn
			20					25				30			
Gln	Leu	Arg	Asp	Pro	Thr	Ser	Pro	Lys	Phe	Pro	Glu	Asp	Phe	Asp	Asp
		35				40					45				
Gly	Glu	His	Ala	Lys	Gln	Lys	Ser	Val	Ile	Ser	Trp	Leu	Leu	Asn	His
	50				55					60					
Asp	Pro	Ala	Lys	Arg	Pro	Thr	Ala	Thr	Glu	Leu	Leu	Lys	Ser	Glu	Leu
65				70					75					80	
Leu	Pro	Pro	Pro	Gln	Met	Glu	Glu	Ser	Glu	Leu	His	Glu	Val	Leu	His
			85					90					95		
His	Thr	Leu	Thr	Asn	Val	Asp	Gly	Lys	Ala	Tyr	Arg	Thr	Met	Met	Ala
		100					105					110			
Gln	Ile	Phe	Ser	Gln	Arg	Leu	Ala	Gly	Ala	Gly	Gly	Gly	Gly	Tyr	Arg
	115				120							125			
Ser	Arg	Leu	Gly	Val	Pro	Arg									

<212> DNA

<213> Homo sapiens

<400> 5569

```

nntttttttt tttttttttt ttgttaacct agagaaaaaa attttattta aagacacatt
60
ttaagtaaaa tgaagaacat tttacttatt tttatgtcca gtacagtcaa agcagccaca
120
ttgcataacc ccggggggacc cccttcctct ttgtgatgcc ccagaacaat attgatttga
180
ttatagaaag ccaccggcag cctacatgcg caacggtgag ttgttggtta tatacactgt
240
ggaccataca gtggaatatt acagtcaata aaaggatatt ttagagagaa aaaaaaacat
300
tggaacacgc ttatgatata atgttaggca aaatcgctgt tatgaacagc tcgtttgggg
360
cagagcaaat cctgggaagt aacgctgagg ctgttggtgc aggcgggtgga gtacaacatc
420
ttcgagggta tggagtgcc aagctcccca ctagtggtca tcagccaggg caagatcgct
480
tttgaagacg gaaacatcaa cgtaacaag ggcattggcc gcttcattcc gcggaaggcg
540
ttcccggagc acagttccac gtggctggaa cttcacaatc atggcagaag gcacgtctgc
600
gaggcatcct ggggctgcac tgctgaccc cttctctctc ccctggccct gagtgtctgc
660
ttcatgtggc tcagcccttc cgtccttcaa gccttcacga gcttcagggc agccccgagt
720
ctgtgcccag gtacactggc taaaatgcag tgtcttccaa atagccatat ctcttttaat
780
cagggagcaa ttccagcatg gaagtcacca tcatgctcct gctggcaggt acaggtgcc
840
gtttgtgacg gatgaaagca ccgacagccc acgcgt
876

```

<210> 5570

<211> 169

<212> PRT

<213> Homo sapiens

<400> 5570

```

Thr Ala Arg Leu Gly Gln Ser Lys Ser Trp Glu Val Thr Leu Arg Leu
1      5      10      15
Leu Val Gln Ala Val Glu Tyr Asn Ile Phe Glu Gly Met Glu Cys His
20     25     30
Gly Ser Pro Leu Val Val Ile Ser Gln Gly Lys Ile Val Phe Glu Asp
35     40     45
Gly Asn Ile Asn Val Asn Lys Gly Met Gly Arg Phe Ile Pro Arg Lys
50     55     60
Ala Phe Pro Glu His Ser Ser Thr Trp Leu Glu Leu His Asn His Gly
65     70     75     80
Arg Arg His Val Cys Glu Ala Ser Trp Gly Cys Thr Ala Asp Pro Leu
85     90     95
Leu Ser Pro Leu Ala Leu Ser Ala Ala Phe Met Trp Leu Ser Pro Ser

```

tgtgaactgt gtgaactgca taggccacag caatcttact gcatccattc cgcgtgcatc
 300
 attatttttg atttgtattc attcagttcca ccgaagcatt cacttggcac ctctccaaat
 360
 ctgggtactg tgcaagatcc ttccttgga cactgaagga aaatcagaca cggcccttct
 420
 ctcaagttcg cagactctcc ggtatccaga tactacggct ctcatagtat cagaaaacac
 480
 agccacaagc gcaggtaagt atcagaggtg ttttacgaga tacatgtatc agattcttaa
 540
 ggctgctgta ccaaaatacc acaaactgca tggcttaaaa caacagaaat ttattccctc
 600
 acaatcctgg aggccagatg tctgaaatca agatattggt agggttgggt ccttctcgag
 660
 actctgaggg agaactctgt acatgcctgt tttcctagct tctagtact tctccaatt
 720
 cttaggggtc tttggctcat agatgcattg ctctaattct tgccctccatc ttcccatggc
 780
 cttcagctct gtgtgtctat ttcccttct tttctaagag ctagtcattg aatttagggc
 840
 ccaccctact acaggttgat ctcatctcca ggtccttgat ttcactctgca aaaacttttt
 900
 ccaaataatg tcacacgtgg agattcccag tgaatgtatc tcctgggggc cactattcag
 960
 cctattac
 968

<210> 5568

<211> 130

<212> PRT

<213> Homo sapiens

<400> 5568

Met Gln Ser Val Asn Cys Val Asn Cys Ile Gly His Ser Asn Leu Thr
 1 5 10 15
 Ala Ser Ile Pro Ala Ala Ser Leu Phe Leu Ile Cys Ile His Ser Val
 20 25 30
 His Arg Ser Ile His Leu Ala Pro Leu Gln Ile Trp Val Leu Cys Lys
 35 40 45
 Ile Leu Pro Trp Asp Thr Glu Gly Lys Ser Asp Thr Ala Leu Leu Ser
 50 55 60
 Ser Ser Gln Thr Leu Arg Tyr Pro Asp Thr Thr Ala Leu Ile Val Ser
 65 70 75 80
 Glu Asn Thr Ala Thr Ser Ala Gly Lys Tyr Gln Arg Cys Phe Thr Arg
 85 90 95
 Tyr Met Tyr Gln Ile Leu Lys Ala Ala Val Pro Lys Tyr His Lys Leu
 100 105 110
 His Gly Leu Lys Gln Gln Lys Phe Ile Pro Ser Gln Ser Trp Arg Pro
 115 120 125
 Asp Val
 130

<210> 5569

<211> 876

<210> 5565
 <211> 472
 <212> DNA
 <213> Homo sapiens

<400> 5565
 nggatccaaa cgccgtggcc gcgggcccgc gcccgggcag acccgggctc cgctctcacg
 60
 tcacgcggta catgggctac agttccttgt ccgagggctt ccgggagctg gagccgcaca
 120
 gaatgaagg gctcactggt agtgggtccc aacttcgttg catattaaac cccccggaga
 180
 acttaaaactc cagtgccag tcctatgcaa tcagatcctg ggtctccact gtgcagcgcc
 240
 cgtggagagc cagcgatgtg gagggctcag atcaccagct tctttgggga cagggtctca
 300
 ctgcccccaa ggctggagtc cgggtgtgca atcacggctc acagcagtct cgacctccag
 360
 ggctcaagcg atcctccagc ctcagcctcc cgagcagctg ggagcacagg cgcataccac
 420
 gcgtggcttt tttgagacga gggcttgcca tgtttcccag gctggtctcg aa
 472

<210> 5566
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 5566
 Met Gln Ser Asp Pro Gly Ser Pro Leu Cys Ser Ala Arg Gly Glu Pro
 1 5 10 15
 Ala Met Trp Arg Val Glu Ile Thr Gln Phe Phe Gly Asp Arg Val Ser
 20 25 30
 Leu Pro Pro Arg Leu Glu Ser Gly Gly Ala Ile Thr Ala His Ser Ser
 35 40 45
 Leu Asp Leu Gln Gly Ser Ser Asp Pro Pro Ala Ser Ala Ser Arg Ala
 50 55 60
 Ala Gly Ser Thr Gly Ala Tyr His Ala Trp Leu Phe
 65 70 75

<210> 5567
 <211> 968
 <212> DNA
 <213> Homo sapiens

<400> 5567
 tttttttttt tttttttttt taggttccaa taaaatttta tttatgaaca ctaaaatttg
 60
 aatttcatat gctttttctca tgccacaaaa tattattctt ttgattgtat tcaacctttt
 120
 taaaaaccat ttttagctca caagctgtac aaaaacagac ggtgagtaaa ttggcccaca
 180
 gaccggtttg ctageccctg ggcttaagag atctgtccac ttactcctca acatgcagag
 240

				260						265					270		
Ala	Pro	Ser	Arg	Pro	Pro	Ser	Phe	Ser	Pro	Cys	Pro	Ala	Glu	Asp	Leu		
		275					280					285					
Phe	Pro	Gly	His	Arg	Tyr	Asp	Gly	Gly	Leu	Asp	Ser	Gly	Phe	His	Ser		
		290				295					300						
Val	Asp	Ser	Gly	Ser	Lys	Arg	Trp	Ser	Gly	Asn	Glu	Ser	Thr	Asp	Glu		
305					310					315					320		
Phe	Ser	Glu	Leu	Ser	Phe	Arg	Ile	Ser	Glu	Leu	Ala	Arg	Glu	Pro	Arg		
				325					330					335			
Gly	Pro	Arg	Glu	Arg	Lys	Glu	Asp	Gly	Ser	Ala	Asp	Gly	Asp	Pro	Val		
			340					345					350				
Gln	Ile	Asp	Phe	Ile	Asp	Ser	His	Val	Pro	Gly	Glu	Asp	Glu	Glu	Arg		
		355					360					365					
Gly	Thr	Val	Glu	Glu	Gln	Arg	Pro	Pro	Glu	Leu	Ser	Pro	Gly	Ala	Gly		
		370				375						380					
Asp	Arg	Glu	Arg	Ala	Pro	Ser	Ser	Arg	Arg	Glu	Glu	Pro	Ala	Gly	Glu		
385					390					395					400		
Glu	Arg	Arg	Arg	Pro	Asp	Thr	Leu	Gln	Leu	Trp	Gln	Glu	Arg	Glu	Arg		
				405					410					415			
Arg	Gln	Gln	Gln	Gln	Ser	Gly	Ala	Trp	Gly	Ala	Pro	Arg	Lys	Asp	Ser		
			420					425					430				
Leu	Leu	Lys	Pro	Gly	Leu	Arg	Ala	Val	Val	Gly	Gly	Ala	Ala	Ala	Val		
		435					440					445					
Ser	Thr	Gln	Ala	Met	His	Asn	Gly	Ser	Pro	Lys	Ser	Ser	Ala	Ser	Gln		
		450				455						460					
Ala	Gly	Gly	Cys	Ser	Gly	Ala	Gly	Ser	Pro	Ala	Pro	Ala	Pro	Ala	Ser		
465					470					475					480		
Gln	Glu	Pro	Leu	Pro	Ile	Ala	Gly	Pro	Ala	Thr	Ala	Pro	Ala	Pro	Arg		
				485					490					495			
Pro	Leu	Gly	Ser	Ile	Gln	Arg	Pro	Asn	Ser	Phe	Leu	Phe	Arg	Ser	Ser		
			500					505					510				
Ser	Gln	Ser	Gly	Ser	Gly	Pro	Ser	Ser	Pro	Asp	Ser	Val	Leu	Arg	Pro		
		515					520						525				
Arg	Arg	Tyr	Pro	Gln	Val	Pro	Asp	Glu	Lys	Asp	Leu	Met	Thr	Gln	Leu		
						535					540						
Arg	Gln	Val	Leu	Glu	Ser	Arg	Leu	Gln	Arg	Pro	Leu	Pro	Glu	Asp	Leu		
545					550					555					560		
Ala	Glu	Ala	Leu	Ala	Ser	Gly	Val	Ile	Leu	Cys	Gln	Leu	Ala	Asn	Gln		
				565					570					575			
Leu	Arg	Pro	Arg	Ser	Val	Pro	Phe	Ile	His	Val	Pro	Ser	Pro	Ala	Val		
				580													

atctatatatt gtaggggttc ggggccagg ccgggtccct atctctgtgt ataaactgta
 2520
 cagaccgtgg ccgccctgcc tgtgtgtgtg tgtgtgcgcg cgcgcgcgcg tctgtccgt
 2580
 gtgttggtgg ctgtggccat ggctctgtgc ccaccagcat ctccctcctg agatgccggc
 2640
 ctctcatgct cccggagcgt ccgccaaccc ccgtgtcac ctcccttctg ttatcgctga
 2700
 cagctttctt gcgtctcatt tgctgccgag ccccgagcgc acggtgatgc tcgggtctgc
 2760
 ccccgacccc ctgccacagg ccggaagccg cagggggcac cgtggggaag ctaacccggc
 2820
 cccttcccc aggagtcaact gtgccagccc caccacatcc tggaagagga ggaggcct
 2878

<210> 5564

<211> 683

<212> PRT

<213> Homo sapiens

<400> 5564

Met Ala Ala Val Ala Ala Pro Leu Ala Ala Gly Gly Glu Glu Ala
 1 5 10 15
 Ala Ala Thr Thr Ser Val Pro Gly Ser Pro Gly Leu Pro Gly Arg Arg
 20 25 30
 Ser Ala Glu Arg Ala Leu Glu Glu Ala Val Ala Thr Gly Thr Leu Asn
 35 40 45
 Leu Ser Asn Arg Arg Leu Lys His Phe Pro Arg Gly Ala Ala Arg Ser
 50 55 60
 Tyr Asp Leu Ser Asp Ile Thr Gln Ala Asp Leu Ser Arg Asn Arg Phe
 65 70 75 80
 Pro Glu Val Pro Glu Ala Ala Cys Gln Leu Val Ser Leu Glu Gly Leu
 85 90 95
 Ser Leu Tyr His Asn Cys Leu Arg Cys Leu Asn Pro Ala Leu Gly Asn
 100 105 110
 Leu Thr Ala Leu Thr Tyr Leu Asn Leu Ser Arg Asn Gln Leu Ser Leu
 115 120 125
 Leu Pro Pro Tyr Ile Cys Gln Leu Pro Leu Arg Val Leu Ile Val Ser
 130 135 140
 Asn Asn Lys Leu Gly Ala Leu Pro Pro Asp Ile Gly Thr Leu Gly Ser
 145 150 155 160
 Leu Arg Gln Leu Asp Val Ser Ser Asn Glu Leu Gln Ser Leu Pro Ser
 165 170 175
 Glu Leu Cys Gly Leu Ser Ser Leu Arg Asp Leu Asn Val Arg Arg Asn
 180 185 190
 Gln Leu Ser Thr Leu Pro Glu Glu Leu Gly Asp Leu Pro Leu Val Arg
 195 200 205
 Leu Asp Phe Ser Cys Asn Arg Val Ser Arg Ile Pro Val Ser Phe Cys
 210 215 220
 Arg Leu Arg His Leu Gln Val Ile Leu Leu Asp Ser Asn Pro Leu Gln
 225 230 235 240
 Ser Pro Pro Ala Gln Val Cys Leu Lys Gly Lys Leu His Ile Phe Lys
 245 250 255
 Tyr Leu Ser Thr Glu Ala Gly Gln Arg Gly Ser Ala Leu Gly Asp Leu

gacctggccc cttctcggcc cccgagtttc agtccctgcc ctgcagagga tctatttccg
900
ggacatcggg acgatgggtg gctggactca ggcttccaca gcgttgatag tggcagcaag
960
agggtggtctg gaaatgagtc aacagatgaa ttttcagagc tgtcattccg gatctcagag
1020
ctggccccggg agccccgggg gccacagaaa cgcaaggagg atggctcagc ggacggagac
1080
cctgtgcaga ttgacttcat cgacagccat gtccccgggg aggatgaaga gcgaggcact
1140
gtggaggagc agcgaccacc cgaattaagc cctggggcag gggacaggga gagggcacca
1200
agcagcaggg gggaggagcc ggacggggag gagcgggggc gcccggacac cttgcagctg
1260
tggcaggagc ggggaacggcg gcagcagcag cagagcgggg cgtggggggc cccgaggaag
1320
gatagcctct tgaagccagg gctcagggtc gttgtgggag gggccggcgc cgtgtccact
1380
caagccatgc acaacggctc gcctaagtc agtgcctccc aagcaggggg ctgcagcggg
1440
gcagggagcc ccgcccctgc cctgcctcc caagagcccc tcccatagc tggaccagcg
1500
acagcacctg ctccacggcc acttggtctc attcagagac caaacagctt cctcttccgt
1560
tcctcctctc agagtggctc aggcccttcc tcaccagact ctgtcctgag acctcggcgg
1620
tacccccagg ttccagatga gaaggactta atgactcagc tgcgccaggt ccttgagtcc
1680
cggctgcagc ggcccctgcc tgaggacctg gccgaggctc tggccagtgg ggtcatcctg
1740
tgccagctgg ccaaccagct acggccggcg tccgtgccct tcatccatgt gccctcccct
1800
gctgtgccaa aactcagtgc cctcaaggct cggaagaatg tggagagttt tctagaagcc
1860
tgtcgaaaaa tgggggtgcc tgaggctgac ctgtgctcgc cctcggtatc cctccagggc
1920
actgcccggg ggctgcggac cgcgctggag gccgtgaagc ggggtggggg caaggcccta
1980
ccgcccctct ggccccctc tggctctggg ggcttcgtcg tcttctacgt ggtcctcatg
2040
ctgctgtct atgtcaccta cactcggctc ctgggttccct agggcccaaa atcggccctc
2100
cctcacccct ttccttctct ctctatttat aaggctccctg ctccaccga cccacctgc
2160
ggtgccttca gcccacaa aagacactag tgcacccct tcacagacac tgacctcaga
2220
ggccccactc tgggtgcccc agaccctggg cccccagcct ctggcctccc tccagtagcc
2280
ccacgagtcc ccacctctca gtgctgacgg tgccttcatg tccccgccc cctgcccct
2340
gccctctgta ccccgtaggg ggtggcagga gctggagtct ccccttccct cctgtgccct
2400
ccccttcccc cccaacagc tgctatgggg gggctaaatt atctctatct ttagagaggg
2460

```
<210> 5563
<211> 2878
<212> DNA
<213> Homo sapiens
```

```

<400> 5563
nagtccaggca gcgggagccg ccgggagcgg atggcgggcg ccgtagcggc tccactcgcc
60
gccggggggtg aggaggcggc agccacgacc tccgtgcccc ggtctccagg tctgccgggg
120
agacgcagtg cagagcgggc cctagaggag gccgtggcca ccgggaccct gaacctgtct
180
aaccggcgct tgaagcactt cccccggggc gcggcccgta gctacgacct gtcagacatc
240
accaggctg acctgtcccg gaaccggttt cccgagggtg ccgaggcggc gtgccagctg
300
gtgtccctgg agggcctgag cctctaccac aattgctga gatgctgaa ccagccttg
360
gggaatctca cagccctcac ctacctcaac ctccagccga accagctgtc gctgctgcc
420
ccctacatct gccagctgcc cctgagggtc ctcatcgtca gcaacaacaa gctgggagcc
480
ctgccccctg acatcggcac cctgggaagc ctgcgacagc ttgacgtgag cagcaacgag
540
ctccaatccc tgccctcgga actgtgtggc ctctcttccc tgcgggacct caatgtccgg
600
aggaaccagc tcagtacgct gcccgaagag ctgggggacc tccctctggt ccgcctggat
660
ttctcctgta accgcgtctc ccgaatccca gtctccttct gccgcctgag gcacctgcag
720
gtcattctgc tggacagcaa ccctctgcag agtccacctg cccaggctct cctgaagggg
780
aaacttcaca tcttcaagta tttgtccaca gaggccgggc agcgtgggtc ggccctgggg
840

```

tcttctaaga gattttgcaa tgaggagaag cattgttttc aaactatata actgagcctt
 1620
 atttataatt agggatatta tcaaaatatg taaccatgag gcccctcagg tctgatcag
 1680
 tcagaatgga tgctttcacc agcagacccg gccatgtggc tgctcgggcc tgggtgctcg
 1740
 ctgctgtgcg agacatttagc cctttagtta tgagcctgtg ggaacttcag gggttcccag
 1800
 tggggagagc agtggcagtg ggaggcatct gggggccaaa ggtcagtggc aggggggtatt
 1860
 tcagtattat acaactgctg tgaccagact tgtatactgg ccgaatatca gtgctgtttg
 1920
 taatttttca ctttgagaac caacattaat tccatatgaa tcaagtgttt tgtaactgct
 1980
 attcatttat tcagcaaata tttattgatc atctcttctc cataagatag tgtgataaac
 2040
 acagtcatga ataaagtatt tttccacaaa aaaaaaaaaa aaaaaaaaaa
 2089

<210> 5562

<211> 372

<212> PRT

<213> Homo sapiens

<400> 5562

Met	Ser	Lys	Ala	Phe	Gly	Leu	Leu	Arg	Gln	Ile	Cys	Gln	Ser	Ile	Leu
1			5					10					15		
Ala	Glu	Ser	Ser	Gln	Ser	Pro	Ala	Asp	Leu	Glu	Glu	Lys	Lys	Glu	Glu
		20						25					30		
Asp	Ser	Asn	Met	Lys	Arg	Glu	Gln	Pro	Arg	Glu	Arg	Pro	Arg	Ala	Trp
		35					40					45			
Asp	Tyr	Pro	His	Gly	Leu	Val	Gly	Leu	His	Asn	Ile	Gly	Gln	Thr	Cys
	50				55					60					
Cys	Leu	Asn	Ser	Leu	Ile	Gln	Val	Phe	Val	Met	Asn	Val	Asp	Phe	Thr
65				70					75					80	
Arg	Ile	Leu	Lys	Arg	Ile	Thr	Val	Pro	Arg	Gly	Ala	Asp	Glu	Gln	Arg
			85					90					95		
Arg	Ser	Val	Pro	Phe	Gln	Met	Leu	Leu	Leu	Glu	Lys	Met	Gln	Asp	
		100					105					110			
Ser	Arg	Gln	Lys	Ala	Val	Arg	Pro	Leu	Glu	Leu	Ala	Tyr	Cys	Leu	Gln
		115					120					125			
Lys	Cys	Asn	Val	Pro	Leu	Phe	Val	Gln	His	Asp	Ala	Ala	Gln	Leu	Tyr
	130					135				140					
Leu	Lys	Leu	Trp	Asn	Leu	Ile	Lys	Asp	Gln	Ile	Thr	Asp	Val	His	Leu
145			150					155						160	
Val	Glu	Arg	Leu	Gln	Ala	Leu	Tyr	Thr	Ile	Arg	Val	Lys	Asp	Ser	Leu
			165				170					175			
Ile	Cys	Val	Asp	Cys	Ala	Met	Glu	Ser	Ser	Arg	Asn	Ser	Ser	Met	Leu
		180					185					190			
Thr	Leu	Pro	Leu	Ser	Leu	Phe	Asp	Val	Asp	Ser	Lys	Pro	Leu	Lys	Thr
	195					200					205				
Leu	Glu	Asp	Ala	Leu	His	Cys	Phe	Phe	Gln	Pro	Arg	Glu	Leu	Ser	Ser
	210				215					220					
Lys	Ser	Lys	Cys	Phe	Cys	Glu	Asn	Cys	Gly	Lys	Lys	Thr	Arg	Gly	Lys

<400> 5561
tctagagcag gtgcgcggct gcaccggcag ccgcgggaag ctccggcccg caggggtttcc
60
ccgcacgctg gcgcccagct ccgcggcgcg aggccgctgt aagtttcgct ttccattcag
120
tgkanaacga aagctgggcg gggtgccacg agcgcggggc cagaccaagg cgggcccgga
180
gcggaacttc ggtcccagct cgggtcccgg ctccagtcgg acgtggaact cagcagcgga
240
ggctggacgc ttgcatggcg cttgagagat tccatcgtgc ctgggtcaca taagcgcttc
300
ctggaagtga agtcgtgctg tcctgaacgc gggccaggca gctgcggcct ggggggtttg
360
gagtgatcac gaatgagcaa ggcgtttggg ctccagggc aaatctgtca gtccatcctg
420
gctgagtcct cgcagtcgcc ggcagatcct gaagaaaaga aggaagaaga cagcaacatg
480
aagagagagc agcccagaga gcgtcccagg gcctgggact accctcatgg cctggttggt
540
ttacacaaca ttggacagac ctgctgcctt aactccttga ttcaggtgtt cgtaatgaat
600
gtggacttca ccaggatatt gaagaggatc acggtgcccga ggggagctga cgagcagagg
660
agaagcgctc ctttccagat gcttctgctg ctggagaaga tgcaggacag ccggcagaaa
720
gcagtgcggc ccctggagct ggcctactgc ctgcagaagt gcaacgtgcc cttgtttgtc
780
caacatgatg ctgcccact gtacctcaaa ctctggaacc tgattaagga ccagatcact
840
gatgtgcact tgggtggagag actgcaggcc ctgtatacga tccgggtgaa ggactccttg
900
atttgcggtg actgtgccat ggagagtagc agaaacagca gcatgtcac cctcccactt
960
tctctttttg atgtggactc aaagcccctg aagacactgg aggacgccct gactgcttc
1020
ttccagccca gggagttatc aagcaaaagc aagtgttctt gtgagaactg tgggaagaag
1080
accggtggga aacaggtcct gaagctgacc catttgcccc agaccctgac aatccacctc
1140
atgcgattct ccatcaggaa ttcacagacg agaaagatct gccactccct gtacttcccc
1200
cagagcttgg atttcagcca gatccttcca atgaagcgag agtcttgtga tgctgaggag
1260
cagtctggag ggcagtatga gctttttgct gtgattgcgc acgtgggaat ggcagactcc
1320
ggtcattact gtgtctacat ccggaatgct gtggatggaa aatggttctg cttcaatgac
1380
tccaatatct gcttgggtgc ctgggaagac atccagtgtc cctacggaaa tccaaactac
1440
cactggcagg aaactgcata tcttctggtt tacatgaaga tggagtgtca atggaaatgc
1500
ccaaaacctt cagagattga cagcgtgtca ttttccattt ccgttcctgg atctacggag
1560

```

      770      775      780
Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser
785      790      795      800
Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys
      805      810      815
Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp
      820      825      830
Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu
      835      840      845
Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly
      850      855      860
Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile
865      870      875      880
Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val
      885      890      895
Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu
      900      905      910
Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys
      915      920      925
Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr
      930      935      940
Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys
945      950      955      960
Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe
      965      970      975
Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val
      980      985      990
Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser
      995      1000      1005
Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp
      1010      1015      1020
Ile Tyr Leu Pro Thr His Val Arg Lys Asn Pro His Ser Met Ile Gln
1025      1030      1035      1040
Cys Ser Ile Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly
      1045      1050      1055
Met Glu Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr
      1060      1065      1070
Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro
      1075      1080      1085
Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu
      1090      1095      1100
Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val
1105      1110      1115      1120
Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn
      1125      1130      1135
Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val
      1140      1145      1150
Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu Ser Trp
      1155      1160      1165

```

<210> 5561

<211> 2089

<212> DNA

<213> Homo sapiens

340	345	350
Arg Asp Phe Leu Arg Leu Gln Gln Glu Asn Lys Glu Arg Ser Glu Ala		
355	360	365
Leu Arg Arg Gln Gln Leu Leu Gln Glu Gln Gln Leu Arg Glu Gln Glu		
370	375	380
Glu Tyr Lys Arg Gln Leu Leu Ala Glu Arg Gln Lys Arg Ile Glu Gln		
385	390	395
Gln Lys Glu Gln Arg Arg Arg Leu Glu Glu Gln Gln Arg Arg Glu Arg		
405	410	415
Glu Ala Arg Arg Gln Gln Glu Arg Glu Gln Arg Arg Arg Glu Gln Glu		
420	425	430
Glu Lys Arg Arg Leu Glu Glu Leu Glu Arg Arg Arg Lys Glu Glu Glu		
435	440	445
Glu Arg Arg Arg Ala Glu Glu Glu Lys Arg Arg Val Glu Arg Glu Gln		
450	455	460
Glu Tyr Ile Arg Arg Gln Leu Glu Glu Glu Gln Arg His Leu Glu Val		
465	470	475
Leu Gln Gln Gln Leu Leu Gln Glu Gln Ala Met Leu Leu His Asp His		
485	490	495
Arg Arg Pro His Pro Gln His Ser Gln Gln Pro Pro Pro Pro Gln Gln		
500	505	510
Glu Arg Ser Lys Pro Ser Phe His Ala Pro Glu Pro Lys Ala His Tyr		
515	520	525
Glu Pro Ala Asp Arg Ala Arg Glu Val Pro Val Arg Thr Thr Ser Arg		
530	535	540
Ser Pro Val Leu Ser Arg Arg Asp Ser Pro Leu Gln Gly Ser Gly Gln		
545	550	555
Gln Asn Ser Gln Ala Gly Gln Arg Asn Ser Thr Ser Ser Ile Glu Pro		
565	570	575
Arg Leu Leu Trp Glu Arg Val Glu Lys Leu Val Pro Arg Pro Gly Ser		
580	585	590
Gly Ser Ser Ser Gly Ser Ser Asn Ser Gly Ser Gln Pro Gly Ser His		
595	600	605
Pro Gly Ser Gln Ser Gly Ser Gly Glu Arg Phe Arg Val Arg Ser Ser		
610	615	620
Ser Lys Ser Glu Gly Ser Pro Ser Gln Arg Leu Glu Asn Ala Val Lys		
625	630	635
Lys Pro Glu Asp Lys Lys Glu Val Phe Arg Pro Leu Lys Pro Ala Gly		
645	650	655
Glu Val Asp Leu Thr Ala Leu Ala Lys Glu Leu Arg Ala Val Glu Asp		
660	665	670
Val Arg Pro Pro His Lys Val Thr Asp Tyr Ser Ser Ser Ser Glu Glu		
675	680	685
Ser Gly Thr Thr Asp Glu Glu Asp Asp Asp Val Glu Gln Glu Gly Ala		
690	695	700
Asp Glu Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser Ser Leu		
705	710	715
Asn Leu Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile Val His		
725	730	735
Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu Gly Thr		
740	745	750
Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His		
755	760	765
Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln		

caaaataaat caaggctgca atgcagctgg tgctgttcag attccaaaaa aaaaaaaaaa
 3840
 ccatgggtacc eggatcctcg aattcc
 3866

<210> 5560

<211> 1165

<212> PRT

<213> Homo sapiens

<400> 5560

Met	Ala	Asn	Asp	Ser	Pro	Ala	Lys	Ser	Leu	Val	Asp	Ile	Asp	Leu	Ser
1				5					10					15	
Ser	Leu	Arg	Asp	Pro	Ala	Gly	Ile	Phe	Glu	Leu	Val	Glu	Val	Val	Gly
			20					25					30		
Asn	Gly	Thr	Tyr	Gly	Gln	Val	Tyr	Lys	Gly	Arg	His	Val	Lys	Thr	Gly
			35				40					45			
Gln	Leu	Ala	Ala	Ile	Lys	Val	Met	Asp	Val	Thr	Glu	Asp	Glu	Glu	Glu
	50					55					60				
Glu	Ile	Lys	Leu	Glu	Ile	Asn	Met	Leu	Lys	Lys	Tyr	Ser	His	His	Arg
65					70				75						80
Asn	Ile	Ala	Thr	Tyr	Tyr	Gly	Ala	Phe	Ile	Lys	Lys	Ser	Pro	Pro	Gly
				85					90					95	
His	Asp	Asp	Gln	Leu	Trp	Leu	Val	Met	Glu	Phe	Cys	Gly	Ala	Gly	Ser
			100					105					110		
Ile	Thr	Asp	Leu	Val	Lys	Asn	Thr	Lys	Gly	Asn	Thr	Leu	Lys	Glu	Asp
	115						120					125			
Trp	Ile	Ala	Tyr	Ile	Ser	Arg	Glu	Ile	Leu	Arg	Gly	Leu	Ala	His	Leu
	130					135					140				
His	Ile	His	His	Val	Ile	His	Arg	Asp	Ile	Lys	Gly	Gln	Asn	Val	Leu
145					150				155						160
Leu	Thr	Glu	Asn	Ala	Glu	Val	Lys	Leu	Val	Asp	Phe	Gly	Val	Ser	Ala
			165					170					175		
Gln	Leu	Asp	Arg	Thr	Val	Gly	Arg	Arg	Asn	Thr	Phe	Ile	Gly	Thr	Pro
		180					185					190			
Tyr	Trp	Met	Ala	Pro	Glu	Val	Ile	Ala	Cys	Asp	Glu	Asn	Pro	Asp	Ala
	195					200						205			
Thr	Tyr	Asp	Tyr	Arg	Ser	Asp	Leu	Trp	Ser	Cys	Gly	Ile	Thr	Ala	Ile
	210					215					220				
Glu	Met	Ala	Glu	Gly	Ala	Pro	Pro	Leu	Cys	Asp	Met	His	Pro	Met	Arg
225					230				235						240
Ala	Leu	Phe	Leu	Ile	Pro	Arg	Asn	Pro	Pro	Pro	Arg	Leu	Lys	Ser	Lys
			245					250						255	
Lys	Trp	Ser	Lys	Lys	Phe	Ile	Asp	Phe	Ile	Asp	Thr	Cys	Leu	Ile	Lys
		260					265					270			
Thr	Tyr	Met	Gln	Arg	Pro	Thr	Thr	Glu	Gln	Leu	Leu	Lys	Phe	Pro	Phe
	275						280					285			
Ile	Arg	Asp	Gln	Pro	Thr	Glu	Arg	Gln	Val	Arg	Ile	Gln	Leu	Lys	Asp
	290				295					300					
His	Ile	Asp	Arg	Thr	Arg	Lys	Lys	Arg	Gly	Glu	Lys	Glu	Glu	Thr	Glu
305				310					315						320
Tyr	Glu	Tyr	Ser	Gly	Ser	Glu	Glu	Glu	Asp	Asp	Ser	His	Gly	Glu	Glu
			325					330					335		
Gly	Glu	Pro	Ser	Ser	Ile	Met	Asn	Val	Pro	Gly	Glu	Ser	Thr	Leu	Arg

gaggaggacg acgatgtgga gcaggaaggg gctgacgagt ccacctcagg accagaggac
2220
accagagcag cgtcatctct gaatttgagc aatggtgaaa cggaatctgt gaaaaccatg
2280
attgtccatg atgatgtaga aagtgaagcg gccatgaccc catccaagga gggcactcta
2340
atcgtcgccc agactcagtc cgctagtagc acactccaga aacacaaatc ttctctctcc
2400
tttacacctt ttatagaccc cagattacta cagatttctc catctagcgg aacaacagt
2460
acatctgtgg tgggattttc ctgtgatggg atgagaccag aagccataag gcaagatcct
2520
acccgaaaag gctcagtggg caatgtgaat cctaccaaca ctaggccaca gagtgcaccc
2580
ccggagattc gtaaatacaa gaagaggttt aactctgaga ttctgtgtgc tgccttatgg
2640
ggagtgaatt tgctagtggg tacagagagt ggcctgatgc tgctggacag aagtggccaa
2700
gggaaggtct atcctcttat caaccgaaga cgatttcaac aaatggacgt acttgagggc
2760
ttgaatgtct tggtgacaat atctggcaaa aaggataagt tacgtgtcta ctatttgtcc
2820
tggttaagaa ataaaatact tcacaatgat ccagaagttg agaagaagca gggatggaca
2880
accgtagggg atttgaagg atgtgtacat tataaagttg taaaatatga aagaatcaaa
2940
tttctggtga ttgctttgaa gagttctgtg gaagtctatg cgtgggcacc aaagccatat
3000
caciaaattta tggcctttaa gtcatttgga gaattggtac ataagccatt actggtggat
3060
ctcactgttg aggaaggcca gaggttgaaa gtgatctatg gatcctgtgc tggattccat
3120
gctgttgatg tggattcagg atcagtctat gacatttata taccaacaca tgtaagaaag
3180
aaccacact ctatgatcca gtgtagcatc aaaccccatg caatcatcat cctccccaat
3240
acagatggaa tggagcttct ggtgtgctat gaagatgagg gggtttatgt aaacacatat
3300
ggaaggatca ccaaggatgt agttctacag tggggagaga tgcctacatc agtagcatat
3360
attgatcca atcagacaat gggctgggga gagaaggcca tagagatccg atctgtggaa
3420
actggtcact tggatggtgt gttcatgcac aaaagggtc aaagactaaa attcttgtgt
3480
gaacgcaatg acaagggtgt ctttgcctct gttcgtctg gtggcagcag tcaggtttat
3540
ttcatgacct taggcaggac ttctcttctg agctggtaga agcagtgtga tccagggatt
3600
actggcctcc agagtcttca agatcctgag aacttggaaat tccttgtaac tggagctcgg
3660
agctgcaccg agggcaacca ggacagctgt gtgtgcagac ctcagtgtgt gggttctctc
3720
ccctccttcc tgttctctt atataccagt ttatcccat tctttttttt tttcttactc
3780

atcaagggcc agaatgtgtt gctgactgag aatgcagagg tgaaacttgt tgactttggt
600
gtgagtgtc agctggacag gactgtgggg cggagaaata cgttcatagg cactccctac
660
tggatggctc ctgaggatcat cgcctgtgat gagaacccag atgccaccta tgattacaga
720
agtgatcttt ggtcttgtgg cattacagcc attgagatgg cagaagggtc tccccctctc
780
tgtgacatgc atccaatgag agcactgttt ctcatccca gaaaccctcc tccccggctc
840
aagtccaaga agtggctgaa gaagttcatt gacttcattg acacatgtct catcaagact
900
tacatgcagc ggcccaccac ggagcagctt ttgaagtttc cttttataag ggatcagccc
960
acggagcggc aggtccgcat ccagcttaag gatcatatag atcgtaccag gaagaagcgg
1020
ggtgagaaag aggagacaga atatgagtac agcggcagcg aggaggaaga tgacagccat
1080
ggagaggaag gagagccaag ttccatcatg aacgtgcctg gagagtctac tcttcgccga
1140
gatttcctga gactgcagca ggagaacaag gaacgttccg aggctcttcg gagacaacag
1200
ttactacagg agcaacagct ccgggagcag gaagaatata aaaggcaact gctggcagag
1260
agacagaagc ggattgagca gcagaaagaa cagaggcgac ggctagaaga gcaacaaagg
1320
agagagcggg aggctagaag gcagcaggaa cgtgaacagc gaaggagaga acaagaagaa
1380
aagagcgctc tagaggagt ggagagaagg cgcaaagaag aagaggagag gagacgggca
1440
gaagaagaaa agaggagagt tgaaagagaa caggagtata tcaggcgaca gctagaagag
1500
gagcagcggc acttggaagt ccttcagcag cagctgctcc aggagcaggc catgttactg
1560
catgaccata ggaggccgca cccgcagcac tcgcagcagc cgccaccacc gcagcaggaa
1620
aggagcaagc caagcttcca tgctcccgag cccaaagccc actacgagcc tgctgaccga
1680
gcgcgagagg ttctgtgag aacaacatct cgctcccctg ttctgtcccg tcgagattcc
1740
ccactgcagg gcagtgggca gcagaatagc caggcaggac agagaaactc caccagcagt
1800
attgagccca ggcttctgtg ggagagagtg gagaagctgg tgcccagacc tggcagtggc
1860
agctcctcag ggtccagcaa ctcaggatcc cagcccgggt ctaccctgg gtctcagagt
1920
ggctccgggg aacgcttcag agtgagatca tcatccaagt ctgaaggctc tccatctcag
1980
cgcctggaaa atgcagtga aaaacctgaa gataaaaagg aagttttcag acccctcaag
2040
cctgctggcg aagtggatct gaccgcactg gccaaagagc ttcgagcagt ggaagatgta
2100
cggccacctc acaaagtaac ggactactcc tcatccagtg aggagtcggg gacgacggat
2160

130 135 140
 Leu Arg Glu Gln Val Glu Lys Lys Asn Gly Glu Leu Lys Ser Leu Arg
 145 150 155 160
 Gln Arg Val Ser Arg Ser Asp Ser Gln Val Arg Lys Leu Gln Glu Lys
 165 170 175
 Leu Asp Glu Leu Arg Arg Val Ser Val Pro Tyr Pro Ser Ser Leu Leu
 180 185 190
 Ser Pro Ser Arg Glu Pro Pro Lys Met Asn Pro Val Val Glu Pro Leu
 195 200 205
 Ser Trp Met Leu Gly Thr Trp Leu Ser Asp Pro Pro Gly Ala Gly Thr
 210 215 220
 Tyr Pro Thr Leu Gln Pro Phe Gln Tyr Leu Glu Glu Val His Ile Ser
 225 230 235 240
 His Val Gly Gln Pro Met Leu Asn Phe Ser Phe Asn Ser Phe His Pro
 245 250 255
 Asp Thr Arg Lys Pro Met His Arg Glu Cys Gly Phe Ile Arg Leu Lys
 260 265 270
 Pro Asp Thr Asn Lys Val Ala Phe Val Ser Ala Gln Asn Thr Gly Val
 275 280 285
 Val Glu Val Glu Glu Gly Glu Val Asn Gly Gln Glu Leu Cys Ile Ala
 290 295 300
 Ser His Ser Ile Ala Arg Ile Ser Phe Ala Lys Glu Pro His Val Glu
 305 310 315 320
 Gln Ile Thr Arg Lys Phe Arg Leu Asn Ser Glu Gly Lys Leu Glu Gln
 325 330 335
 Thr Val Ser Met Ala Thr Thr Thr Gln Pro Met Thr Gln His Leu His
 340 345 350
 Val Thr Tyr Lys Lys Val Thr Pro
 355 360

<210> 5559

<211> 3866

<212> DNA

<213> Homo sapiens

<400> 5559

nnaattcgag gatccgggta ccatggcaca gagcgacaga gacatttatt gttatttggt
 60
 ttttggtggc aaaaaggga aatggcgaac gactccctg caaaaagtct ggtggacatc
 120
 gacctctcct ccctgcggga tctgtctggg atttttgagc tgggtggaagt ggttggaat
 180
 ggcacctatg gacaagtcta taagggtcga catgttaaaa cgggtcagtt ggcagccatc
 240
 aaagttatgg atgtcactga ggatgaagag gaagaaatca aactggagat aaatatgcta
 300
 aagaaatact ctcatcacag aaacattgca acatattatg gtgctttcat caaaaagagc
 360
 cctccaggac atgatgacca actctggctt gttatggagt tctgtggggc tgggtccatt
 420
 acagaccttg tgaagaacac caaagggaac aactcaaag aagactggat cgcttacatc
 480
 tccagagaaa tcttgagggg actggcacat cttcacattc atcatgtgat tcaccgggat
 540

cggcagaaca agagccaggt gtgctgcctg cgggagcagg tggagaagaa gaacggcgag
 1140
 ctgaagagcc tgcggcagag ggtcagccgc tccgacagcc aggtgcggaa gctacaggag
 1200
 aagctggatg agctgaggag agtgagcgtc ccctatccaa gtagcctgct gtcgcccagc
 1260
 cgcgagcccc ccaagatgaa cccagtgggtg gagccactgt cctggatgct gggcacctgg
 1320
 ctgtcggacc cacctggagc cgggacctac cccacactgc agcccttcca gtacctggag
 1380
 gaggttcaca tctcccacgt gggccagccc atgctgaact tctcgttcaa ctccttcac
 1440
 ccggacacgc gcaagccgat gcacagagag tgtggcttca ttcgcctcaa gcccgacacc
 1500
 aacaaggtgg cctttgtcag cgcccagaac acaggcgtgg tggaagtgga ggagggcgag
 1560
 gtgaacgggc aggagctgtg catcgcatcc cactccatcg ccaggatctc cttcgccaag
 1620
 gagccccacg tagagcagat cacccggaag ttcaggctga attctgaagg caaacttgag
 1680
 cagacggtct ccatggcaac cacgacacag ccaatgactc agcatcttca cgtcacctac
 1740
 aagaaggtga ccccgtaaac ctagagcttc tggagccctc gggagggcct ggctactgtg
 1800
 cctcaacggt tcggctcctc aacagacagt ccctgcggca gaagtgggtg tggccgtgag
 1860
 cctctgcagg ctcaagagtg ttgtccagat gtttctgtac tggcatagaa aaaccaaata
 1920
 aaaggccttt atttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1970

<210> 5558

<211> 360

<212> PRT

<213> Homo sapiens

<400> 5558

Met	Asp	Asp	Phe	Thr	Pro	Pro	Gly	Ser	Gly	Ala	Cys	Lys	Phe	Ile	Gly
1				5					10					15	
Ser	Leu	His	Ser	Tyr	Ser	Phe	Ser	Ser	Lys	His	Thr	Arg	Glu	Arg	Pro
		20						25					30		
Ser	Val	Pro	Arg	Glu	Pro	Ile	Asp	Arg	Lys	Arg	Leu	Lys	Lys	Asp	Val
		35					40					45			
Glu	Pro	Ser	Cys	Ser	Gly	Ser	Ser	Leu	Gly	Pro	Asp	Lys	Gly	Leu	Ala
	50					55					60				
Gln	Ser	Pro	Pro	Ser	Ser	Ser	Leu	Thr	Ala	Thr	Arg	Gln	Lys	Pro	Ser
65				70					75					80	
Gln	Ser	Pro	Ser	Ala	Pro	Pro	Ala	Asp	Val	Thr	Pro	Lys	Pro	Ala	Thr
			85					90						95	
Glu	Ala	Val	Gln	Ser	Glu	His	Ser	Asp	Ala	Ser	Pro	Met	Ser	Ile	Asn
		100					105					110			
Glu	Val	Ile	Leu	Ser	Ala	Ser	Gly	Ala	Cys	Lys	Leu	Ile	Asp	Ser	Leu
		115					120					125			
His	Ser	Tyr	Cys	Phe	Ser	Ser	Arg	Gln	Asn	Lys	Ser	Gln	Val	Cys	Cys

```

<400> 5557
nnccgcgggct gggccaaggc ccgcgatggt gatctgctgt gcggccgtga actgctccaa
60
ccggcagggga aagggcgaga agcgcgccgt ctccctccac aggttcccc taaaggactc
120
aaaacgtcta atccaatggt taaaagctgt tcagagggat aactggactc ccactaagta
180
ttcatttttc tgtagtgagc atttcaccaa agacagcttc tccaagaggc tggaggacca
240
gcatcgcttg ctgaagccca cggccgtgcc atccatcttc cacctgaccg agaagaagag
300
gggggctgga ggccatggcc gcacccggag aaaagatgcc agcaagggca caggggggtgt
360
gaggggacac tcgagtgccg ccaccgcgag aggagctgca ggttggtcac cgtcctcgag
420
tggaaacccg atggccaagc cagagtcccg caggttgaag caagctgctc tgcaagggtga
480
agccacaccc agggcgcccc aggagcaggt ccgaaggagc aggccagca agctcctgga
540
acggactcca ggagatggac tggccaccat ggtcgaggca gtcagggaaa agcagaagcg
600
tctgccacag atgctggcga tgagagcgcc acttcctcca tcgaaggggg cgtgacagat
660
aagagtggca tttctatgga tgactttacg cccccaggat ctggggcgctg caaatattatc
720
ggctcacttc attcgtagc tttctcctcc aagcacaccc gagaaaggcc atctgtcccc
780
cgagagccca ttgaccgcaa gaggctgaag aaagatgtgg aaccaagctg cagtgggagc
840
agcctgggac ccgacaaggg cctggcccag agccctccca gctcatcact taccgcgaca
900
cggcagaagc ctteccagag cccctctgcc cctcctgccg acgtcacccc aaagccagcc
960
acggaagccg tgcagagcga gcacagcgac gccagcccca tgtccatcaa cgaggtcac
1020
ctgtcggcgt caggggcctg caagctcatc gactcactgc actcctactg cttctcctcc
1080

```

aggctctgac acaggaatcc ctctgcatct ttat
274

<210> 5554

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5554

Met	Asp	Gly	Gly	Gln	Gly	Thr	Ser	Gly	Pro	Leu	Lys	Thr	Ala	Lys	Gln
1				5				10					15		
Phe	Leu	Ala	Ile	Ser	Glu	Glu	Val	Ala	Phe	Val	Pro	Glu	Lys	Arg	Thr
		20					25				30				
Pro	Gln	Pro	His	Pro	Thr	Ala	Ser	Pro	Asp	Pro	Lys	Val	Arg	Ile	Thr
		35				40					45				
Gly	Pro	Ala	Thr	Ala	Pro	Ala	Val	Val	Leu	Ser	His	Tyr	Arg	Gly	Cys
	50				55				60						
Tyr	Phe	Pro	Ser	Gln	Cys	Pro	Trp	Gln	Pro	Trp	Lys	Pro	Met	Lys	Gln
65				70					75					80	
Ala	Leu	Thr	Gln	Glu	Ser	Leu	Cys	Ile	Phe						
			85					90							

<210> 5555

<211> 414

<212> DNA

<213> Homo sapiens

<400> 5555

acgcgtgtgt gcacgcaggc atgggctttc agggctttca gagcaggggc cgacggcatt
60
ctccctcggg ccagcgggtca gatgtggggg tcaggaaaca aggccaggt ggggatgaat
120
cacagggctg tgattctaga agggacagct gtgagggggc gggacaggct aagctggagg
180
actcaccaga cttgcggggg tcaacacgct ccagatgtct cctagacctc tcacactcag
240
cacatccaaa cctgaacca gcacctggcc ccacacctgt ccctggcta gagacggggg
300
cctcagccca gctgttcccc ttctcccaca gcctctcagc tgcgtgtcgg gtccattctg
360
catcttgaac atctctccca gtggattccc ttctgctgtc ctggtccagg atcc
414

<210> 5556

<211> 115

<212> PRT

<213> Homo sapiens

<400> 5556

Met	Gly	Phe	Gln	Gly	Phe	Gln	Ser	Arg	Gly	Arg	Arg	His	Ser	Pro	Ser
1				5				10				15			
Gly	Gln	Arg	Ser	Asp	Val	Gly	Phe	Arg	Lys	Gln	Gly	Pro	Gly	Gly	Asp
		20					25				30				
Glu	Ser	Gln	Gly	Cys	Asp	Ser	Arg	Arg	Asp	Ser	Cys	Glu	Gly	Pro	Gly

ccaggagcga gggtcacgta aggatccaaa aggtactcgt ggatgtgtgg atgaggggaag
 1260
 agagaaagtc tagataacac tgagggttact tgtaagtta catcatatgg ctgatcaaga
 1320
 attcttccca ttctgtcgaa cagcactttc aaaaaatgac cttcaaagaa agcagcttct
 1380
 aaattgcact tttccaatgc ttttggagac ccaggccact cccatcttaa gcagatagca
 1440
 cagtagtctc ggaactgcct atgagcgtct cggaggtaag tgtcatatcc tgtgccctca
 1500
 acatggtagg aggattttgc gtcacccgg accagacaga gaaaactatt tacaatttta
 1560
 tgaacttcag tttttccatc atttttgggg tggctcggag tagcaggagg tgaagaacta
 1620
 agccactctt ggtttggcaa agtgttttct ggtgaaatgt cagtaaataa tggatcttct
 1680
 tccagatct
 1689

<210> 5552

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5552

Met	Gly	Arg	Ile	Leu	Asp	Gln	Pro	Tyr	Asp	Val	Asn	Leu	Gln	Val	Thr
1				5				10					15		
Ser	Val	Leu	Ser	Arg	Leu	Ser	Leu	Phe	Pro	His	Pro	His	Ile	His	Glu
		20					25					30			
Tyr	Leu	Leu	Asp	Pro	Tyr	Val	Asn	Leu	Ala	Pro	Gly	Cys	Arg	Ser	Leu
	35					40					45				
Phe	Ser	Val	Ile	Val	Arg	Val	Val	Gly	Asp	Leu	Met	Leu	Arg	Ile	Gln
	50				55				60						
Arg	Ile	Gln	Asp	Phe	Thr	Pro	Lys	Leu	Leu	Leu	Val	Arg	Lys	Arg	Leu
65			70					75			80				
Leu	Gly	Leu	Glu	Pro	Glu	Gly	Pro	Ile	Ser	Asp	Leu	Glu	Pro	Val	Glu
			85				90				95				
Ala	Leu	Thr	Val	Ser	Ser	Ile	Cys								
			100												

<210> 5553

<211> 274

<212> DNA

<213> Homo sapiens

<400> 5553

ccatggatgg aggccagggt acttcaggac ctctgaagac agcaaagcag tttctggcaa
 60
 tctctgagga ggtggcatth gttccagaaa aaaggacccc ccaaccccat cccacagcct
 120
 caccagaccc taaagtcaga ataaccggcc cagctacagc ccctgcggtc gtgcttagcc
 180
 actacagagg ctgctatttc cccagccagt gtccttgcca gccttggaac ccaatgaagc
 240

195	200	205
Leu Leu Glu Ala Phe His Asn Gln Gly Pro Val Ile Lys Arg Lys His		
210	215	220
Asp Leu His Lys Met Ala Glu Ala Asn Arg Ala Leu Ala His Tyr Arg		
225	230	235
Trp Trp		240

<210> 5551

<211> 1689

<212> DNA

<213> Homo sapiens

<400> 5551

```

ttttaaatta cattatztat ttttttagatc atccctctta gtccctgcatg cattgtttagc
60
acaaaaagtt gaacttgatc acaacttcct ttgaagagag agtaggtaca caatgaccat
120
ctgaagagtt tctccacgga gggaccaaga attccagacg ctggtaacac tgtcagtaac
180
ctacacaact ttcaatacaa aaaaatttac caaatatcct gtttaatgta aacaaggcag
240
gaggcaaaac agagtattac agtaacacta ttttacaggg ccagaaaaat gtgattatct
300
accatgtttt aacacataaa gtgtcacaaat gacatgcata tttgatttac tacataaccc
360
aaaatataat taccatatag tgtgggtttta gcacttcact gtaacgtctt ctgtcaatac
420
tgatggactt cataattaaa tggcaattgt atgttaatgc aataatttat gaaaacatta
480
ccatgaattt atgaagtaat tccataattt gtgccttgta aaattaagtg taacaatggt
540
tacactagca acagtgtgaag cgagctaaga attttggtcc ttatatatat acatatatac
600
atatatacac acacaataat gtacaattaa accaaaaagc tatgaatcca ctcacagctt
660
ccatattgca caaacagata cattacgaga aagttacata gttataaggt gagtactata
720
tggcaatagg ctaagacaaa tctgagttct atcaagtaaa gaatgcggct cataactaaa
780
aacaatatcca aagactatat tgtagaaaag ttttaaaaaa tgtgcatatt tattgatata
840
aatgtgaagc aaggctgaaa ttcacttttg aacttgctat ggcaatcaat tgttatgacg
900
gtgctttcca ctcagcatag tgcatttttag ttactgtttt tgcaagtact gagtaacaga
960
aatattcagc tgtcaacaga aggtaagaaa aactggtgat gcagtacaat gtttcactaa
1020
caaattgaac tcaactgtgag agctttctact ggctctaggt ctgaaatagg gccttcaggt
1080
tccaaaccaa gtaaccgctt tctgactaac agaagcttgg gagtaaagtc ttgaatacgc
1140
tggattcgaa gcataaggtc tccaacaacc ctgacaatta cagagaagag agatctacag
1200

```


gaaaagattt attagaaaat tctcacgctg aactggtgta gcatgtggtg cagcattcag
 1320
 tgaaactggc tggaggaaat aggcttggtt ccagagttgt ccttatacaa aatgtataaa
 1380
 aagcagtttc tgggtgtgact tgtgctctgc ctccaccctt tgacatccca aaatatccca
 1440
 ccagtggcta tgcttaccga ttttacagat gggtaaactg aggcaccaag gtagtagttg
 1500
 cactaatggt tacacagtgc agtggctctt gggagttgcc cttctctgcc tgcccggtgt
 1560
 gggttgtggt ggggaaaggg gctcagggca ggaccacggc ataagtggga aacatctcac
 1620
 caggagatgg gaaagtctag aagggaagac actcaaagtc tggaagggaa aagtctttgg
 1680
 gtgaggcaga gactccactg ccagcttttag aggtgggttag aagaaaggcc agtgctggtg
 1740
 aggaagccct gatctggagg cctagtcgga gacttcgctg tagtaatact tgtgggcagc
 1800
 tggcgttgtc ttccagccgg ccgcccggaa ctcaatgac tccagcagca gcagctggca
 1860
 gggcc
 1865

<210> 5550

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5550

Met	Val	Ala	Pro	Ala	Val	Lys	Val	Ala	Arg	Gly	Trp	Ser	Gly	Leu	Ala
1				5					10					15	
Leu	Gly	Val	Arg	Arg	Ala	Val	Leu	Gln	Leu	Pro	Gly	Leu	Thr	Gln	Val
		20						25					30		
Arg	Trp	Ser	Arg	Tyr	Ser	Pro	Glu	Phe	Lys	Asp	Pro	Leu	Ile	Asp	Lys
		35					40					45			
Glu	Tyr	Tyr	Arg	Lys	Pro	Val	Glu	Glu	Leu	Thr	Glu	Glu	Glu	Lys	Tyr
	50					55				60					
Val	Arg	Glu	Leu	Lys	Lys	Thr	Gln	Leu	Ile	Lys	Ala	Ala	Pro	Ala	Gly
65				70					75					80	
Lys	Thr	Ser	Ser	Val	Phe	Glu	Asp	Pro	Val	Ile	Ser	Lys	Phe	Thr	Asn
			85					90					95		
Met	Met	Met	Ile	Gly	Gly	Asn	Lys	Val	Leu	Ala	Arg	Ser	Leu	Met	Ile
			100					105					110		
Gln	Thr	Leu	Glu	Ala	Val	Lys	Arg	Lys	Gln	Phe	Glu	Lys	Tyr	His	Ala
		115				120					125				
Ala	Ser	Ala	Glu	Glu	Gln	Ala	Thr	Ile	Glu	Arg	Asn	Pro	Tyr	Thr	Ile
		130				135					140				
Phe	His	Gln	Ala	Leu	Lys	Asn	Cys	Glu	Pro	Met	Ile	Gly	Leu	Val	Pro
145				150					155					160	
Ile	Leu	Lys	Gly	Gly	Arg	Phe	Tyr	Gln	Val	Pro	Val	Pro	Leu	Pro	Asp
			165					170					175		
Arg	Arg	Arg	Arg	Phe	Leu	Ala	Met	Lys	Trp	Met	Ile	Thr	Glu	Cys	Arg
			180					185					190		
Asp	Lys	Lys	His	Gln	Arg	Thr	Leu	Met	Pro	Glu	Lys	Leu	Ser	His	Lys

130	135	140
Leu Phe Tyr Thr Gly Lys Gln Ser Tyr Tyr Ser	Leu Met His Asp Val	
145	150	155
Xaa Met Glu Cys Tyr Ser Ile		160
	165	

<210> 5549

<211> 1865

<212> DNA

<213> Homo sapiens

<400> 5549

gcgtcaccga gggccgcgca gactgcgacg gatacagggg gggcaagggt ttccttttgg
 60
 cgcttccctt tggaccccgg agtgaaaaac tctaactgcc agatcagtgg agagaaacgc
 120
 agatttagga ccctgaggag tctttttcac ccgtttcccg tcaactcgctc aggcgcgcgc
 180
 agggcagtc tttgtggggtc ctctgtggcca gccaaagtgg ttgccccgc agtgaagggt
 240
 gcccaggat ggtcgggcct ggcgttgggc gtgcggcggg ctgtcttgca gcttccaggg
 300
 ctaactcagg tgagatggag ccgctatagt cctgaattca aggatccctt gattgacaag
 360
 gaatattatc gcaagccagt ggaggagcta actgaggagg agaaatatgt tcgggagctc
 420
 aagaagactc agctcatcaa agctgtcca gcaggaaaa caagttctgt gtttgaagac
 480
 ccagtcatca gttaaattcac caacatgatg atgataggag gaaacaaagt actggccaga
 540
 tccctcatga ttcagactct ggaagctgtg aaaaggaagc agtttgagaa gtaccatgcc
 600
 gcttctgcag aggaacaggc aaccatcgaa cgcaaccctt acaccatctt ccatcaagca
 660
 ctgaaaaact gtgagcctat gattgggctg gtacccatcc tcaaggaggg ccgtttctac
 720
 caggtccttg taccctacc cgaccggcgt cgccgcttcc tagccatgaa gtggatgac
 780
 actgagtgcc gggataaaaa gcaccagcgg aactgatgc cggagaagct gtcacacaag
 840
 ctgctggagg ctttcataa ccaggggccc gtgatcaaga ggaagcatga cttgcacaag
 900
 atggcagagg ccaaccgtgc cctggcccac taccgtggt ggtagagtct ccaggaggag
 960
 ccaggggccc tctgccgcaa gaaacagtgt gagctactgc cacgtgaaa actacctgtg
 1020
 ggttaaggat gtagttcctt tgtaagggtg ggcaggcctc gtaagaaaga ttagcagca
 1080
 tattcactat ccgttaatcc ttctttcttt gaggtggaa cttgctctct ctgccctat
 1140
 ttccttgtaa agaggagca cattgacttg ggaatttcct ccaggaaact cagggtgtt
 1200
 ttctcttccc ttaggttggg gcggacctt ggacatataa aggaagcagt ttagtatca
 1260

cttccagaaa aaactgtaac cagagacgtg attggcagca gatggctgat taaggaggaa
 600
 ctagaagaaa tgtagtgga aaaactgtca gatctagatt atatgcagtt cattcggctg
 660
 ctagaaaagt tattgacatc gcagtgtggt gctgctgagg aagaatttgt gcagaggttt
 720
 cgaagaagt taactcttga atcaaaaaaa cagctgattg aacctgtaca gtatgatgag
 780
 caaggaatgg ccttttagcaa aagcgaaggt aaaagaaaga ctgcaaaagc agaagcaatt
 840
 gtttataaac atggaagtgg aagaataaaa gtaaattgaa ttgattacca gctttacttc
 900
 ccgatcacac aggacagaga acagctgatg ttccctttcc actttgttga ccggctggga
 960
 aagcacgacg tgacctgcac agtctcaggg ggcgggaggt cagcgcaggc tggagcaata
 1020
 cgactggcaa tggcaaaagc cttgtgcagc ttgtgcaccg aggacgaggt cgagtggatg
 1080
 agacaagctg gactacttac tactgatcca cgtgtgaggg aacggaagaa gccaggccaa
 1140
 gagggagccc gcagaaagtt tacgtggaag aaacgctaag ggtttgctcc caggaaagga
 1200
 gaggaagagc tatatatatg tgccgacatg tggcagacac acagtaaata atggctgacc
 1260
 agcatgaggg cagtactgtc agaaatttct ttgagctgtg agatggattt atttttaa
 1320
 gctactttgt aaaggtgacc tttaaaaaat aaaaggaaaa taaagaatgt tagtttcaa
 1380
 aaaaaaaaaa .a
 1391

<210> 5548

<211> 167

<212> PRT

<213> Homo sapiens

<400> 5548

Xaa Val Leu Arg Arg Thr Val Ser Tyr Arg Leu Leu Leu Trp Gly Arg
 1 5 10 15
 Gly Ser Leu Ala Arg Lys Gln Gly Leu Trp Lys Thr Ala Ala Pro Glu
 20 25 30
 Leu Gln Thr Asn Val Arg Ser Gln Ile Leu Arg Leu Arg His Thr Ala
 35 40 45
 Phe Val Ile Pro Lys Lys Asn Val Pro Thr Ser Lys Arg Glu Thr Tyr
 50 55 60
 Thr Glu Asp Phe Ile Lys Lys Gln Ile Glu Glu Phe Asn Ile Gly Lys
 65 70 75 80
 Arg His Leu Ala Asn Met Met Gly Glu Asp Pro Glu Thr Phe Thr Gln
 85 90 95
 Glu Asp Ile Asp Arg Ala Ile Ala Tyr Leu Phe Pro Ser Gly Leu Phe
 100 105 110
 Glu Lys Arg Ala Arg Pro Val Met Lys His Pro Glu Gln Ile Phe Pro
 115 120 125
 Arg Gln Arg Ala Ile Gln Trp Gly Glu Asp Gly Arg Pro Phe His Tyr

<211> 183
 <212> PRT
 <213> Homo sapiens

<400> 5546

```

Ala Ala Glu Glu Glu Lys Glu Met Asp Leu Pro Asp Ser Ala Ser Arg
 1           5           10           15
Val Phe Cys Gly Arg Ile Leu Ser Met Val Asn Thr Asp Asp Val Asn
           20           25           30
Ala Ile Ile Leu Ala Gln Lys Asn Met Leu Asp Arg Phe Glu Lys Thr
           35           40           45
Asn Glu Met Leu Leu Asn Phe Asn Asn Leu Ser Ser Ala Arg Leu Gln
 50           55           60
Gln Met Ser Glu Arg Phe Leu His His Thr Arg Thr Leu Val Glu Met
65           70           75           80
Lys Arg Asp Leu Asp Ser Ile Phe Arg Arg Ile Arg Thr Leu Lys Gly
           85           90           95
Lys Leu Ala Arg Gln His Pro Glu Ala Phe Ser His Ile Pro Glu Ala
           100          105          110
Ser Phe Leu Glu Glu Glu Asp Glu Asp Pro Ile Pro Pro Ser Thr Thr
           115          120          125
Thr Thr Ile Ala Thr Ser Glu Gln Ser Thr Gly Ser Cys Asp Thr Ser
           130          135          140
Pro Asp Thr Val Ser Pro Ser Leu Ser Pro Gly Phe Glu Asp Leu Ser
145          150          155          160
His Val Gln Pro Gly Ser Pro Ala Ile Asn Gly Arg Ser Gln Thr Asp
           165          170          175
Asp Glu Glu Met Thr Gly Glu
           180

```

<210> 5547
 <211> 1391
 <212> DNA
 <213> Homo sapiens

<400> 5547

```

nntgtcctac ggcggacagt ttcgtaccgg cttcttctct ggggtagggg tagcctcgcc
60
cggaagcaag gcctctggaa aaccgcgggc cctgagttgc aaacaaatgt cagatcccag
120
atattaaggc taagacatac tgcatttgta ataccaaaga aaaacgttcc tacctcaaaa
180
cgtgaaactt acacagagga ttttattaaa aagcagattg aagagttcaa cataggaaaag
240
agacatttag ccaacatgat gggagaagat ccagaaactt tactcaaga agatattgac
300
agagctattg cttacctttt cccaagtggg ttgtttgaga aacgagccag gccagtaatg
360
aagcatcctg aacagatttt tccaagacaa agagcaatcc agtggggaga agatggccgt
420
ccatttcaat atcttttcta tactggcaaa cagtcatact attcattaat gcatgatgta
480
nntatggaat gttactcaat ttagaaanaa catcaaagtc acttgcaagc caaaagtctg
540

```

cttagtttgc ccaatacctc caaattcctg ggggtggcaca cctgaggttc aggtggcatg
480
actgagccac agtcacacat cccactgta ggataccacc acggttgggt taggttccag
540
cacatggcgg tcccggcctg gcctcttggg cccacctcac ctggtgacta gtgcagacca
600
ctctgttctt gcctgtttca ggcagcggag gaggagaaag agatggacct cccggactcg
660
gcctcgaggg tcttctgcgg ccgcatcctg agcatggtga acacagatga tgtcaacgcc
720
atcatcctgg ccagaagaa catgctggac cgctttgaga agaccaatga gatgctgctc
780
aacttcaaca acctgtccag tgcccgcctg cagcagatga gcgaacgctt cctgcaccac
840
acgaggaccc tagtagagat gaaacgggac ctggacagca tcttccgccg tatcaggacg
900
ctgaaaggga aactggccag gcagcaccca gaggccttca gccatatccc agaggcatcc
960
ttcctggagg aagaggatga agaccccatc ccaccagca ccacgaccac cattgccacc
1020
tcagaacaga gcacgggctc atgtgacacc agccccgaca ccgtctcgcc ctccctgagc
1080
cccggcttcg aggacctgtc ccatgtccag cctggctccc cagccatcaa cgcccgagc
1140
cagacagatg acgaggagat gacgggagaa tagccctgct gcccggtgcc ttgagggggg
1200
ctcagggcag cagcatataa ggtggcagcg ggtaacctg ccttgttctg tcatccaggg
1260
ctcctttgct gcccgttct gtcaccagc gtccttaggg ggacaaggct ctctcccgag
1320
gggtgtggaa ttcctggggg ggtctttaat tctggtcct tccttctca gaacatctct
1380
attctgcaag accctctctg catgccaggg cagcccatc ccagctggag tcgtggggct
1440
gggcacaggg gaatttttcc agagctgagc ctgacgtctg ctctgaagaa tgcttagaag
1500
gttcccagac accagagcca gatgtcccc accaccggc aggacctcct tgagggtcac
1560
aagcacggc tctctgagt tcacccagc ccaccccgcc acccactaat tctgcttttc
1620
ctgccccttg ctccgtaaaa gtatcaaata ctttctcctt ggtatctcaa ggaggtttct
1680
gagataggta gaagtcttga gacggaggct ggccatccat tcagccctga gcgtgctgag
1740
ttctgtgttt ctctgaatag aggtgtggaa cctgaggggc cagcaggcct ctctgaaggc
1800
ctccatggag caaacggagc cacctcggga aagagtttaa tggaatattt ttgtaccgga
1860
tgtttacaga tgctgttggg aagttatcaa taaaagaca ccattactaa aaagggaaaa
1920
gtaaaaaaaa aa
1932

<210> 5546

885 890 895
 Gln Gln Ala Phe Tyr Asn Asp Pro Ser Val Leu Tyr Ile Ser Leu His
 900 905 910
 Arg Tyr Asp Asn Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Glu Glu
 915 920 925
 Val Gly Gly Gly Pro Gly Val Gly Tyr Asn Val Asn Val Ala Trp Thr
 930 935 940
 Gly Gly Val Asp Pro Pro Ile Gly Asp Val Glu Tyr Leu Thr Ala Phe
 945 950 955 960
 Arg Thr Val Val Met Pro Ile Ala His Glu Phe Ser Pro Asp Val Val
 965 970 975
 Leu Val Ser Ala Gly Phe Asp Ala Val Glu Gly His Leu Ser Pro Leu
 980 985 990
 Gly Gly Tyr Ser Val Thr Ala Arg Cys Phe Gly His Leu Thr Arg Gln
 995 1000 1005
 Leu Met Thr Leu Ala Gly Gly Arg Val Val Leu Ala Leu Glu Gly Gly
 1010 1015 1020
 His Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser Ala
 1025 1030 1035 1040
 Leu Leu Ser Val Glu Leu Gln Pro Leu Asp Glu Ala Val Leu Gln Gln
 1045 1050 1055
 Lys Pro Asn Ile Asn Ala Val Ala Thr Leu Glu Lys Val Ile Glu Ile
 1060 1065 1070
 Gln Ser Lys His Trp Ser Cys Val Gln Lys Phe Ala Ala Gly Leu Gly
 1075 1080 1085
 Arg Ser Leu Arg Glu Ala Gln Ala Gly Glu Thr Glu Glu Ala Glu Thr
 1090 1095 1100
 Val Ser Ala Met Ala Leu Ser Val Gly Ala Glu Gln Ala Gln Ala
 1105 1110 1115 1120
 Ala Ala Ala Arg Glu His Ser Pro Arg Pro Ala Glu Glu Pro Met Glu
 1125 1130 1135
 Gln Glu Pro Ala Leu
 1140

<210> 5545

<211> 1932

<212> DNA

<213> Homo sapiens

<400> 5545.

nncccagttt ctcagtgtcc ctgagcctca gttttctcat ctataaataa gaatcgcttg
 60
 aacctgggag gcggagggtg cgctaacc aa gatcgcgcca ttgcaactca gctgggtga
 120
 caggagtga actctgtatc aaaaagaaat aaaaaaacga ggtcaagtag taagagaagc
 180
 ggtaagagt acggaacag gagtcattga cctcttggga gaggagacat tggaggtgtg
 240
 gatgatttgc tgaagcagcc acacacgttc agcttgtgag gacagcagtt gtaggcagg
 300
 ggatgagggg ggaagctggc agatctgtgc aggtgagagg tacctgtggc cttgggctca
 360
 tggaagtggg aggtgatggg attctaattg gcttgggtac agtttacaaa tacaacctct
 420

450 455 460
 Gln His Val Leu Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu Ile
 465 470 475 480
 Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg Val
 485 490 495
 Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro Leu
 500 505 510
 Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu Gln
 515 520 525
 Gln Leu Val Met Gln Gln Gln His Gln Gln Phe Leu Glu Lys Gln Lys
 530 535 540
 Gln Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu Leu
 545 550 555 560
 Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Glu Leu Thr
 565 570 575
 Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro Arg
 580 585 590
 Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu Glu
 595 600 605
 Asp Glu Glu Glu Asp Gly Glu Glu Glu Glu Asp Cys Ile Gln Val Lys
 610 615 620
 Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu Glu
 625 630 635 640
 Pro Gly Ala Gly Tyr Lys Lys Leu Phe Ser Asp Ala Gln Pro Leu Gln
 645 650 655
 Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro His
 660 665 670
 Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly Met
 675 680 685
 Lys Ser Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Gly Val
 690 695 700
 Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn Thr
 705 710 715 720
 His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg
 725 730 735
 Leu Gln Glu Thr Gly Leu Leu Ser Lys Cys Glu Arg Ile Arg Gly Arg
 740 745 750
 Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His Thr
 755 760 765
 Leu Leu Tyr Gly Thr Ser Pro Leu Asn Arg Gln Lys Leu Asp Ser Lys
 770 775 780
 Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro Cys
 785 790 795 800
 Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His Ser
 805 810 815
 Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala Phe
 820 825 830
 Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg Pro
 835 840 845
 Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe Phe
 850 855 860
 Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn Val
 865 870 875 880
 Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly Thr

4727

acagccatgg gattctgctt cttcaactct gtagccatca ccgcaaaact cctacagcag
 2820
 aagttgaacg tgggcaaggt cctcatcggt gactgggaca ttcaccatgg caatggcacc
 2880
 cagcaggcgt tctacaatga cccctctgtg ctctacatct ctctgcatcg ctatgacaac
 2940
 ggggaacttct ttccaggctc tggggctcct gaagagggtg gtggaggacc aggcgtgggg
 3000
 tacaatgtga acgtggcatg gacaggaggt gtggaccccc ccattggaga cgtggaatac
 3060
 cttacagcct tcaggacagt ggtgatgccc attgcccacg agttctcacc tgatgtggtc
 3120
 ctagtctccg ctgggtttga tgctgttgaa ggacatctgt ctccactggg tggctactct
 3180
 gtcaccgcca gatgttttgg ccacttgacc aggcagctga tgaccctggc agggggccgg
 3240
 gtggtgctgg ccctggaggg aggccatgac ttgaccgcca tctgtgatgc ctctgaggct
 3300
 tgtgtctcgg ctctgctcag tgtagagctg cagcccttgg atgaggcagt cttgcagcaa
 3360
 aagcccaaca tcaacgcagt ggccacgcta gagaaagtca tcgagatcca gagcaaacac
 3420
 tggagctgtg tgcagaagtt cgcgctgggt ctgggccggg ccctgcgaga ggcccaagca
 3480
 ggtgagaccg aggaggccga gactgtgagc gccatggcct tgctgtcggg gggggccgag
 3540
 caggcccagg ctgcggcagc ccgggaacac agccccaggc cggcagagga gcccattggg
 3600
 caggagcctg ccctgtgacg ccccgccccc catccctctg ggcttcacca ttgtgatttt
 3660
 gtttattttt tctattaaaa acaaaaagtc acacattcaa caagggtgtg cgtgtgggtc
 3720
 tctcagcctt gcccctctctg ctccctctacg ctgcctcagg cccccagccc tgtggcttcc
 3780
 acctcagctc tagaagcctg ctccctctgc aggggggtgg ggtgtcttcc cagccctgtc
 3840
 ccatgtgtcc ctccacccat tttcttgcac tctgtctgtc cttttctctc ttggagcctg
 3900
 ggccagctca aggtgggcac gggggcccag acagtactct ccagttctgg ggccccccga
 3960
 gtgaggaggg aacgggaagt cgggtgcctt gtttcagctg attttggggg gaaatgcctt
 4020
 a
 4021

<210> 5544

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 5544

Met Leu Leu Val Pro Lys Ala Gln Gly Leu Val Glu Met Leu Gln Thr
 1 5 10 15
 Ile Tyr Glu Thr Glu Ser Cys Phe Ser Ala Asp Gly Met Ser Gly Arg

gttgagatca caggtgccgg gcctggggcg tcgtccgtgt gtaacagcgc acccggctcc
1200
ggccccagct ctcccaacag ctccacagc accatcgctg agaatggctt tactggctca
1260
gtccccaaca tccccactga gatgctccct cagcacccgag ccctccctct ggacagctcc
1320
cccaaccagt tcagcctcta cacgtctcct tctctgcccc acatctccct agggctgcag
1380
gccacgggtca ctgtcaccaa ctcacacctc actgcctccc cgaagctgtc gacacagcag
1440
gaggccgaga ggcaggccct ccagtccttg cggcagggtg gcacgctgac cggcaagtcc
1500
atgagcacat cctctattcc tggctgcctg ctgggcgtgg cactggaggg cgacggggagc
1560
ccccacgggc atgcctccct gctgcagcat gtgctgttgc tggagcaggc ccggcagcag
1620
agcaccctca ttgctgtgcc actccacggg cagtccccac tagtgacggg tgaacgtgtg
1680
gccaccagca tgcggacggg aggcaagctc ccgcggcatc ggcccctgag ccgcactcag
1740
tctcaccgc tgccgcagag tccccaggcc ctgcagcagc tggcatgca acaacagcac
1800
cagcagttcc tggagaagca gaagcagcag cagctacagc tgggcaagat cctcaccaag
1860
acaggggagc tgcccaggca gccaccacc caccctgagg agacagagga ggagctgacg
1920
gagcagcagg aggtcttgct gggggaggga gccctgacca tgccccggga gggctccaca
1980
gagagtgaga gcacacagga agacctggag gaggaggacg aggaagagga tggggaggag
2040
gaggaggatt gcatccaggt taaggacgag gaggggcgaga gtggtgctga ggagggggcc
2100
gacttgagg agcctggtgc tggatacaaa aaactgttct cagatgcccc gccgctgcag
2160
cctttgcagg tgtaccaggc gcccctcagc ctggccactg tgccccacca ggccctgggc
2220
cgtaccaggt cctcccctgc tgcccctggg ggcctgaaga gccccccaga ccagcccgtc
2280
aagcacctct tcaccacagg tgtggtctac gacacgttca tgctaaagca ccagtgcag
2340
tgcgggaaca cacacgtgca ccctgagcat gctggccgga tccagagcat ctggtcccg
2400
ctgcaggaga caggcctgct tagcaagtgc gagcggatcc gaggtcgcaa agccacgcta
2460
gatgagatcc agacagtgca ctctgaatac cacaccctgc tctatgggac cagtcccctc
2520
aaccggcaga agctagacag caagaagttg ctcgccccca tcagccagaa gatgtatgct
2580
gtgctgcctt gtgggggcat cggggtggac agtgacaccg tgtggaatga gatgcactcc
2640
tccagtgtg tgcgcatggc agtgggctgc ctgctggagc tggccttcaa ggtggctgca
2700
ggagagctca agaattgatt tgccatcatc cggccccccag gacaccacgc cgaggaatcc
2760

```
<210> 5543
<211> 4021
<212> DNA
<213> Homo sapiens
```

4724

tgatgggtatt actttttaca aagaatgaaa ccaaattggac tcagccctct cccacatttt
 1440
 cccctcaccc tccaagtcct aaccctcca tcctctctaa cttttcaagc caatccctta
 1500
 atgtcattcc tctctctgtg tatctgtgcc agatgttttc ctttcttctt tctttactgg
 1560
 aaggacctcc acattcttcc ctcttggaa gaggacttta ctaaaagtca cagggtggtg
 1620
 ccagggggga tttccgaatc tccatcaggc gcgctcatag ttgtcccat tgtctaccca
 1680
 cacaaatcct caggaaacca accaccgcc aggtggcctt gagggaggca ttcaccttta
 1740
 tgtgttagaa aaacatgacc agaaatcaaa gatgtcagag ccccgaagca gctaattgaa
 1800
 taagcactca tgttattaaa ggttttgcct tgcgtaacc aaccgaaaaa aaaa
 1854

<210> 5542

<211> 315

<212> PRT

<213> Homo sapiens

<400> 5542

Met	Arg	Met	Cys	Asp	Arg	Gly	Ile	Gln	Met	Leu	Ile	Thr	Thr	Val	Gly
1			5					10						15	
Ala	Phe	Ala	Ala	Phe	Ser	Leu	Met	Thr	Ile	Ala	Val	Gly	Thr	Asp	Tyr
		20					25					30			
Trp	Leu	Tyr	Ser	Arg	Gly	Val	Cys	Arg	Thr	Lys	Ser	Thr	Ser	Asp	Asn
	35				40						45				
Glu	Thr	Ser	Arg	Lys	Asn	Glu	Glu	Val	Met	Thr	His	Ser	Gly	Leu	Trp
	50				55					60					
Arg	Thr	Cys	Cys	Leu	Glu	Gly	Ala	Phe	Arg	Gly	Val	Cys	Lys	Lys	Ile
	65			70					75					80	
Asp	His	Phe	Pro	Glu	Asp	Ala	Asp	Tyr	Glu	Gln	Asp	Thr	Ala	Glu	Tyr
		85					90					95			
Leu	Leu	Arg	Ala	Val	Arg	Ala	Ser	Ser	Val	Phe	Pro	Ile	Leu	Ser	Val
	100						105					110			
Thr	Leu	Leu	Phe	Phe	Gly	Gly	Leu	Cys	Val	Ala	Ala	Ser	Glu	Phe	His
	115						120					125			
Arg	Ser	Arg	His	Asn	Val	Ile	Leu	Ser	Ala	Gly	Ile	Phe	Phe	Val	Ser
	130					135					140				
Ala	Gly	Leu	Ser	Asn	Ile	Ile	Gly	Ile	Ile	Val	Tyr	Ile	Ser	Ala	Asn
	145			150					155					160	
Ala	Gly	Asp	Pro	Gly	Gln	Arg	Asp	Ser	Lys	Lys	Ser	Tyr	Ser	Tyr	Gly
		165						170						175	
Trp	Ser	Phe	Tyr	Phe	Gly	Ala	Phe	Ser	Phe	Ile	Ile	Ala	Glu	Ile	Val
	180						185					190			
Gly	Val	Val	Ala	Val	His	Ile	Tyr	Ile	Glu	Lys	His	Gln	Gln	Leu	Arg
	195					200					205				
Ala	Lys	Ser	His	Ser	Glu	Phe	Leu	Lys	Lys	Ser	Thr	Phe	Ala	Arg	Leu
	210					215					220				
Pro	Pro	Tyr	Arg	Tyr	Arg	Phe	Arg	Arg	Arg	Ser	Ser	Ser	Arg	Ser	Thr
	225				230				235					240	
Glu	Pro	Arg	Ser	Arg	Asp	Leu	Ser	Pro	Ile	Ser	Lys	Gly	Phe	His	Thr

370

375

<210> 5541

<211> 1854

<212> DNA

<213> Homo sapiens

<400> 5541

nncgagctgg cagctccagg ctccggagcc atgccctgca cggaccctcg tctttaccac
60
gctcctgagg aatgaaagga acccagggac cctcagaagg cagcagtgat gcggaccaac
120
cccccggagc ctgcaccctt ccgagggcca taggcgaccc agggaaactgg agagagctcc
180
agaaaaggaaa tcccagcttt cccaaagtcc ctgtggatgc tgacaaaagg agacctgaat
240
ttttggaaga gctgtacta ggttaccogg ctgcagagtg attttccct ccggcactga
300
ctctccccct ccaaccccc gccgtccaga gtacatgaa gaattatgag gatgtgtgac
360
agaggtatcc agatgttgat caccactgta ggagcctttg ccgcttttag ttaatgacc
420
attgcagtgg gcacggacta ctggttatat tccagagggtg tgtgcaggac taaatctaca
480
agtataatg aaaccagcag gaagaatgaa gaagtaatga cccattcggg gctgtggagg
540
acctgctgcc tagaaggggc ttcccgaggc gtgtgcaaga aaatcgatca ctccctgaa
600
gatgctgact acgaacagga cacagccgaa tatctcctgc gagctgtgag ggcctccagt
660
gtcttcccc tctcagtggt cagctgctg ttcttcggcg ggctctgctt ggcagccagt
720
gagttccacc gcagcagaca caacgtcatt ctacgcgagg gcatcttttt tgtctctgca
780
gggttaagca acatcattgg catcatagtt tatatatcag ccaacgccc agaccccggg
840
cagcgtgact ccaaaaaaag ttactcctat ggttggtcct tttatttcgg agccttctct
900
ttcatcatcg cagaaattgt aggagtgggt gccgtgcaca tctatattga aaaacatcag
960
cagttacgag ccaaattccc ctccggagttc ctgaagaaat ctacttttgc ccgcctccc
1020
ccctacaggt atcgattccg gaggcgggtca agttctcgtt ccaccgagcc cagatcccga
1080
gacctgtccc ccacagcaa aggcctccac accatccctt ccactgacat ctcgatgttc
1140
acctctctcc gggacccctc aaagatcacc atggggaccc tcctcaactc cgaccgggac
1200
cacgcttttc tacagttcca caattccaca cccaaagagt tcaaagagtc actgcataat
1260
aatccggcca acaggcgac cagcccggtc tgaactgacc tctgacctct gccccacgcc
1320
cagcacagcc ttgggggaag tgtacagaga tgtctctgag gttgcatggc atggtccttg
1380

<210> 5540
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 5540
 Met Arg Ala Ala Ala Pro Gly Leu Thr Ala Pro Trp Arg Leu Leu
 1 5 10 15
 Gln Cys Cys Glu Leu Glu Ala Gly Glu Leu Gly Met Ala Val Pro Ala
 20 25 30
 Ala Ala Met Gly Pro Ser Ala Leu Gly Gln Ser Gly Pro Gly Ser Met
 35 40 45
 Ala Pro Trp Cys Ser Val Ser Ser Gly Pro Ser Arg Tyr Val Leu Gly
 50 55 60
 Met Gln Glu Leu Phe Arg Gly His Ser Lys Thr Arg Glu Phe Leu Ala
 65 70 75 80
 His Ser Ala Lys Val His Ser Val Ala Trp Ser Cys Asp Gly Arg Arg
 85 90 95
 Leu Ala Ser Gly Ser Phe Asp Lys Thr Ala Ser Val Phe Leu Leu Glu
 100 105 110
 Arg Thr Gly Trp Ser Lys Lys Thr Ile Ile Gly Asp Met Gly Ile Xaa
 115 120 125
 Val Asp Gln Leu Cys Trp His Pro Ser Asn Pro Asp Leu Phe Val Thr
 130 135 140
 Ala Ser Gly Asp Lys Thr Ile Arg Ile Trp Asp Val Arg Thr Thr Lys
 145 150 155 160
 Cys Ile Ala Thr Val Asn Thr Lys Gly Glu Asn Ile Asn Ile Cys Trp
 165 170 175
 Ser Pro Asp Gly Gln Thr Ile Ala Val Gly Asn Lys Asp Asp Val Val
 180 185 190
 Thr Phe Ile Asp Ala Lys Thr His Arg Ser Lys Ala Glu Glu Gln Phe
 195 200 205
 Lys Phe Glu Val Asn Glu Ile Ser Trp Asn Asn Asp Asn Asn Met Phe
 210 215 220
 Phe Leu Thr Asn Gly Asn Gly Cys Ile Asn Ile Leu Ser Tyr Pro Glu
 225 230 235 240
 Leu Lys Pro Val Gln Ser Ile Asn Ala His Pro Ser Asn Cys Ile Cys
 245 250 255
 Ile Lys Phe Asp Pro Met Gly Lys Tyr Phe Ala Thr Gly Ser Ala Asp
 260 265 270
 Ala Leu Val Ser Leu Trp Asp Val Asp Glu Leu Val Cys Val Arg Cys
 275 280 285
 Phe Ser Arg Leu Asp Trp Pro Val Arg Thr Leu Ser Phe Ser His Asp
 290 295 300
 Gly Lys Met Leu Ala Ser Ala Ser Glu Asp His Phe Ile Asp Ile Ala
 305 310 315 320
 Glu Val Glu Thr Gly Asp Lys Leu Trp Glu Val Gln Cys Glu Ser Pro
 325 330 335
 Thr Phe Thr Val Ala Trp His Pro Lys Arg Pro Leu Leu Ala Phe Ala
 340 345 350
 Cys Asp Asp Lys Asp Gly Lys Tyr Asp Ser Ser Arg Glu Ala Gly Thr
 355 360 365
 Val Lys Leu Phe Gly Leu Pro Asn Asp Ser

ctgcagtgtt gtgagttgga agctggggag ctcggcattg cggccccgc tgcagccatg
360
gggccctcgg cggtgggcca gagcgcccc ggctcgatgg ccccggtgtg ctcaagtggc
420
agcgggcccg cgcgctacgt gcttgggatg caggagctgt tccggggcca cagcaagacg
480
cgcgagttcc tggcgcacag cgccaagggt cactcggtgg cctggagttg cgacgggctg
540
cgcctagcct cggggctcct cgacaagacg gccagcgtct tcttgctgga gaggaccggt
600
tgggtcaaaga aaacaattat cggggacatg gggatangtg tggaccagct ttgttggcat
660
ccaagtaatc ctgacctatt tggtacggcg tccggagata aaaccattcg catctgggat
720
gtgaggacta caaatgcat tgccactgtg aactactaaag gggagaacat taatatctgc
780
tggagtctcg atgggcagac cattgctgta ggcaacaagg atgatgtggt gacctttatt
840
gatgccaaga cacaccgttc caaagcagaa gagcagttca agttcgaggt caacgaaatc
900
tcctggaaca atgacaataa tatgttcttc ctgacaaatg gcaatgggtg tatcaacatc
960
ctcagctacc cagaactgaa gcctgtgcag tccatcaacg cccatccttc caactgcac
1020
tgtatcaagt ttgaccccat ggggaagtac ttgcccacag gaagtgcaga tgctttggct
1080
agcctctggg atgtggatga gttagtgtgt gttcggtgct tttccaggct ggattggcct
1140
gtaagaaccc tcagtttcag ccatgatggg aaaatgctgg cgtcagcatc ggaagatcat
1200
tttattgaca ttgctgaagt ggagacaggg gacaaactat gggagggtaca gtgtgagtct
1260
ccgacctica cagtggcgtg gcaccccaaa aggctctctg tggcatttgc ctgtgatgac
1320
aaagacggca aatatgacag cagccgggaa gccggaactg tgaagctgtt tgggcttcct
1380
aatgattctt gagaggaggt ttaggggaga ggaggccccg gcagaggtct tccttcatgt
1440
ggtagtttg gtctgttctc tcggagttgg tgggcaccct aaatatttgt aagttggat
1500
aaattgtaaa cgtctctggt caggctgcgc atttcgttct tttgctttgt ctgtgtatta
1560
gctctttcca ttctttgcc ccagcatgag ttaactcgcg tggactctgc agtgcgagta
1620
gtgacccag cataccttgt cctctggacc tcctgtcttc tctgcttctg ggtgcatggt
1680
agacttttg gcatttgata caacttgac aatacctagt ttggaggag ggaatggaa
1740
gggcatggaa gtttttttaa ataattaaaa aaatatatat ataattttga gaattgagca
1800
ttaataaac tgacttttgt tattatggaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1860
aaaaaaaaaa aaaaaaaaaa aaaaaa
1887

50	55	60
Arg Asn Ile Trp Ile Val Lys Pro Gly Ala Lys Ser Arg Gly Arg Gly		
65	70	75
Ile Met Cys Met Asp His Leu Glu Glu Met Leu Lys Leu Val Asn Gly		80
	85	90
Asn Pro Val Val Met Lys Asp Gly Lys Trp Val Val Gln Lys Tyr Ile		95
	100	105
Glu Arg Pro Leu Leu Ile Phe Gly Thr Lys Phe Asp Leu Arg Gln Trp		110
	115	120
Phe Leu Val Thr Asp Trp Asn Pro Leu Thr Val Trp Phe Tyr Arg Asp		125
	130	135
Ser Tyr Ile Arg Phe Ser Thr Gln Pro Phe Ser Leu Lys Asn Leu Asp		140
145	150	155
Asn Ser Val His Leu Cys Asn Asn Ser Ile Gln Lys His Leu Glu Asn		160
	165	170
Ser Cys His Arg His Pro Leu Leu Pro Pro Asp Asn Met Trp Ser Ser		175
	180	185
Gln Arg Phe Gln Ala His Leu Gln Glu Met Gly Ala Pro Asn Ala Trp		190
	195	200
Ser Thr Ile Ile Val Pro Gly Met Lys Asp Ala Val Ile His Ala Leu		205
	210	215
Gln Thr Ser Gln Asp Thr Val Gln Cys Arg Lys Ala Ser Phe Glu Leu		220
225	230	235
Tyr Gly Ala Asp Phe Val Phe Gly Glu Asp Phe Gln Pro Trp Leu Ile		240
	245	250
Glu Ile Asn Ala Ser Pro Thr Met Ala Pro Ser Thr Ala Val Thr Ala		255
	260	265
Arg Leu Cys Ala Gly Val Gln Ala Asp Thr Leu Arg Val Val Ile Asp		270
	275	280
Arg Arg Leu Asp Arg Asn Cys Asp Thr Gly Ala Phe Glu Leu Ile Tyr		285
	290	295
Lys Gln Pro Val Thr Thr Ser Pro Ala Ser Thr Pro Arg Pro Ser Cys		300
305	310	315
Leu Leu Pro Met Tyr Ser Asp Thr Arg Ala Arg Ser Ser Asp Asp Ser		320
	325	330
Thr Ala Ser Trp Trp Ala Leu Arg Pro Cys Arg Pro Gln Ala Arg Pro		335
	340	345
		350

<210> 5539

<211> 1887

<212> DNA

<213> Homo sapiens

<400> 5539

nntttagaag gttagtgttg gttcttgtat tcgattaaac aggaatacac atatgtctac

60

caaagaatag gtaagggaga aataagaaca ctaaaaaaac tcggaatcgt taagtgtgaa

120

gcatatttgg agttaaaaga accaaatatt actaagtaag cagacgcggg cagcgctgc

180

ataccgggat ttgtagtccc ttccggggcg gggtagacgc cgcctgcgca gaggggccgt

240

cgctcttccg ggcgcgtgcg tgcggcagcg gcgccaggac tgactgcgcc gtggaggctg

300

cgcggtgtca ttgaccggag gctggaccgc aactgtgaca caggagcctt tgagctcatc
 1800
 tataagcagc ccgtcaccac ttccccagcc tccacaccaa ggcccagctg ccttctcccc
 1860
 atgtactccg acaccagggc cagggtcctca gacgacagca cagcaagctg gtgggcacta
 1920
 aggccctgtc gaccacaggc aaggccttga ggactctacc cacggctaag gtcttcattt
 1980
 ccttcccacc gaaccttgat ttcaaggctg caccagcat cctgaagcca agaaaggctg
 2040
 gcctcgacct gtgactcaca ccagtgaggc agtgctgagc acggggtcag ggctggaggg
 2100
 cacaggcaga gggcagctcc caggctggct ggcaccccaa gggaagagct ggtctccctc
 2160
 agaagccctt tctccacag acttctgatc atctccctct tctccctcc tttcacaccg
 2220
 aggctctgct tctctgtgct ctccgaggcc ccagctgga agtgcttgt tgctctgctc
 2280
 ctttgaagtc ggaacaattc ctagcacctg tcggaaggct aaggccaaag gcaaattcaa
 2340
 ggccagactg tgacaaaccc agggctgagg cctgccccat gaagaggctg agccccctga
 2400
 aacccctgcc ccttggttgt acattccaga ggcgcagggg cctgggggat atgaagctag
 2460
 ggaagccctt gcttcgattc ccactgccc ttgtctgga tccaacacca aataaaaaga
 2520
 aacaagtga gtatttgggg cttgactcca ttgctgttg agggtaaga gtggatgggg
 2580
 cgaggccgtg taccacaggg tccacagcaa gagcctgagg ccatcagcag ctctccgtg
 2640
 cagegaggcc cagaattccc acctaggac agacatgggg ctctctattt agggactccc
 2700
 ccagcatctc cgatccaggg gtggggagcg tgagccttca ctttacagat gaagaaactg
 2760
 agtctgaaag aggaggcatg gcttacccaa gatcacgtgg cagtgagtcg acgcagggac
 2820
 atattgccag aactgccgag cactgggagc cccccaacc cagagaacaa gccaaagctag
 2880
 c
 2881

<210> 5538

<211> 352

<212> PRT

<213> Homo sapiens

<400> 5538

Met Asp Ile Asp Lys Asp Leu Glu Ala Pro Leu Tyr Leu Thr Pro Glu
 1 5 10 15
 Gly Trp Ser Leu Phe Leu Gln Arg Tyr Tyr Gln Val Val His Glu Gly
 20 25 30
 Ala Glu Leu Arg His Leu Asp Thr Gln Val Gln Arg Cys Glu Asp Ile
 35 40 45
 Leu Gln Gln Leu Gln Ala Val Val Pro Gln Ile Asp Met Glu Gly Asp

tgcttaagct tttatggat aggtcaggct gcaggggtt gagggcctca gttgtatatc
180
agaatcttca gagcactgcg atgttcaggg gtgagtcagg tctgtagatg tgcacggggt
240
cttctgaagg gtcagtttct gtaatcactt tcagggtgtg cagggccttg tgcagtaaca
300
gtgcacacag aagttagtgt ttctgtgggc taagggttgt agctctgtat caggattctg
360
ggagtgggtc tggatttctg gtgtgtggac ttaagaagct gtgtcagact tgggggaggg
420
gcgttcatgt ataactgggt tcacataggc caagactccc aggtgcattt taggcagagc
480
ctcaggtgtg ttagaggtcc caggggcaga gaggcctatag gtgctgtcag aggccttggg
540
gacatttagg gcagagcctc gaggtagagg tcctgggaca gtgggagcca agggcaagtg
600
ctagagttgc agtgaattta gagcaaagcc tcagctaagt gacacatccc agggcagtag
660
gggatctatc taggttcgtg ctgggcctca ggtaagtgc aggccttagg acaatggggg
720
ctgtggcatg cgtcagggtta cctgccttga tatgggatcg tgacaggccc ctccctatgt
780
gcaggagaca agcagcccaa gaaacaggag aaaaaccag tgttggtgtc cccagagttt
840
gtggatgaag ctctgtgtgc gtgcgaggag taccttagca acttgGCCa catggacatc
900
gacaaggacc tggaggcccc gctgtacctc acccccgagg gctggteccct ctctctccag
960
cgctactacc aagtgggtcca cgaaggggca gaactcaggc acctcgacac tcagggtccag
1020
cgctgtgagg acatcctgca gcagctgcag gccgtggtag cccagataga catggaaggg
1080
gatcgcaaca tctggatcgt gaagccagga gccaaagtcg gtggacgagg catcatgtgc
1140
atggaccacc tggaggagat gctgaagctg gtgaacggca accccgtggt gatgaaggac
1200
ggcaagtggg tgggtgcagaa gtatattgag cgccccctcc tcacttttgg caccaagttt
1260
gacctcagac agtgggttct ggtaactgac tggaaaccac ttaccgtgtg gttctaccgc
1320
gacagctata tccgttttcc cagcagccc ttctccctga agaacctgga caactcagtg
1380
cacctgtgca acaactccat ccagaagcac ctggagaact catgccatcg gcatccactg
1440
cttccgccag acaacatgtg gtctagccag aggttccagg cccacctgca ggagatgggt
1500
gccccaaatg cttgggtcac catcatcgtg cctggcatga aggatgctgt gatccacgca
1560
cttcagacct cccaggacac cgtgcagtgt cggaaggcca gctttgagct ctatggcgct
1620
gacttcgtgt tcggggagga cttccagccc tggctgattg agatcaacgc cagccccacg
1680
atggcacct ccacagcagt cactgcccgg ctctgtgctg gcgtgcaagc tgacaccctg
1740

<213> Homo sapiens

<400> 5536

```

Met Ala Ala Val Asp Asp Leu Gln Phe Glu Glu Phe Gly Asn Ala Ala
 1      5      10      15
Thr Ser Leu Thr Ala Asn Pro Asp Ala Thr Thr Val Asn Ile Glu Asp
 20      25      30
Pro Gly Glu Thr Pro Lys His Gln Pro Gly Ser Pro Arg Gly Ser Gly
 35      40      45
Arg Glu Glu Asp Asp Glu Leu Leu Gly Asn Asp Asp Ser Asp Lys Thr
 50      55      60
Glu Leu Leu Ala Gly Gln Lys Lys Ser Ser Pro Phe Trp Thr Phe Glu
 65      70      75      80
Tyr Tyr Gln Thr Phe Phe Asp Val Asp Thr Tyr Gln Val Phe Asp Arg
 85      90      95
Ile Lys Gly Ser Leu Leu Pro Ile Pro Gly Lys Asn Phe Val Arg Leu
100      105      110
Tyr Ile Arg Ser Asn Pro Asp Leu Tyr Gly Pro Phe Trp Ile Cys Ala
115      120      125
Thr Leu Val Phe Ala Ile Ala Ile Ser Gly Asn Leu Ser Asn Phe Leu
130      135      140
Ile His Leu Gly Glu Lys Thr Tyr His Tyr Val Pro Glu Phe Arg Lys
145      150      155      160
Val Ser Ile Ala Ala Thr Ile Ile Tyr Ala Tyr Ala Trp Leu Val Pro
165      170      175
Leu Ala Leu Trp Gly Phe Leu Met Trp Arg Asn Ser Lys Val Met Asn
180      185      190
Ile Val Ser Tyr Ser Phe Leu Glu Ile Val Cys Val Tyr Gly Tyr Ser
195      200      205
Leu Phe Ile Tyr Ile Pro Thr Ala Ile Leu Trp Ile Ile Pro Gln Lys
210      215      220
Ala Val Arg Trp Ile Leu Val Met Ile Ala Leu Gly Ile Ser Gly Ser
225      230      235      240
Leu Leu Ala Met Thr Phe Trp Pro Ala Val Arg Glu Asp Asn Arg Arg
245      250      255
Val Ala Leu Ala Thr Ile Val Thr Ile Val Leu Leu His Met Leu Leu
260      265      270
Ser Val Gly Cys Leu Ala Tyr Phe Phe Asp Ala Pro Glu Met Asp His
275      280      285
Leu Pro Thr Thr Thr Ala Thr Pro Asn Gln Thr Val Ala Ala Ala Lys
290      295      300
Ser Ser
305

```

<210> 5537

<211> 2881

<212> DNA

<213> Homo sapiens

<400> 5537

```

gcctgcctct tccagagaga ctccccatt gctgtctctt gtgtgtgtca tgcacaagga
60
aggcttggtt gtgtgccagg ataaggggca caagggcctc ggggtgtggc agagacccca
120

```

accccaaaac atcagccagg atccccaaga ggctcaggaa gagaagaaga tgatgagtta
480
ctgggaaatg atgactctga caaaactgag ttacttgctg gacagaagaa aagctcccc
540
ttctggacat ttgaatacta ccaaacattc tttgatgtgg acacctacca ggtctttgac
600
agaattaaag gatctctttt gccaataccc gggaaaaact ttgtgaggtt atatatccgc
660
agcaatccag atctctatgg ccccttttgg atatgtgcca cgttggtctt tgccatagca
720
attagtggga atctttccaa cttcttgatc catctgggag agaagacgta ccattatgtg
780
cccgaattcc gaaaagtgtc catagcagct accatcatct atgcctatgc ctggctggtt
840
cctcttgac tctggggttt cctcatgtgg agaaacagca aagttatgaa catcgtctcc
900
tattcatttc tggagattgt gtgtgtctat ggatattccc tcttcattta tatccccacc
960
gcaatactgt ggattatccc ccagaaagct gttcgttggga ttctagtcac gattgccctg
1020
ggcatctcag gatctctctt ggcaatgaca ttttggccag ctgttcgtga ggataaccga
1080
cgcgttgcac tggccacaat tgtgacaatt gtgttgctcc atatgctgct ttctgtgggc
1140
tgcttggcat acttttttga tgcaccagag atggaccatc tcccaacaac tacagctact
1200
ccaaacaaaa cagttgctgc agccaagtcc agctaagtag gaaagactca cttgagatac
1260
cctctccttg ctgaagtttt tcttgacttc tccagttctc ttttgttttt tggagcatgg
1320
tcttttggga agtggcatcc actgcaggaa agcagaatga gcagagccag cagaactgat
1380
ggagtggcac aaattcccag tgtctggatg gtgccacact ggcgctaat cacccttta
1440
acaagcagaa attaaatgtt gctcagcaca tgtgtctttc agctcttctt tttcaccat
1500
ggatgatcat tgcgagcatg cgctgattgg actgaaatgc cggggaatag gttaggcatg
1560
ctcagtgcg tccctttgcc accacagtca aatgacatgc ttcactgtgg taccttaata
1620
cctgaaatag aaccatggaa aattctgatg tctctctct gaattatgta cagactacct
1680
gggggacct cttctctcca aatgttagcc atcctgaagt agccgaacag tagaaacttt
1740
ggtggggatt aaccgggagc ttgaaaattt gtctttggta acctgatact ggacagctga
1800
actgaatggc tgcaaaataa atacctcaca tgatgtctgt gtctgcaaaa aaaaaaaaaa
1860
aaaaaaaaa aaaaaaaaaa aaaaaaa
1887

<210> 5536

<211> 306

<212> PRT

gaggaagtgt atacagagga ggaggaggag gagtcccagg aggaagagga ggaagaagac
 480
 agtgacgaag aggaaagaac aattg
 505

<210> 5534
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 5534
 Xaa Leu Ala Ser Leu Pro Ala Ser Gly Cys Leu Glu Cys Leu Val Leu
 1 5 10 15
 Gln Ala Pro Ser Gly Ser Asp Lys Ala Gly Thr Met Ser Thr Phe Gly
 20 25 30
 Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile Asp Glu Asp Glu Leu
 35 40 45
 Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu Leu Glu Arg Glu Leu
 50 55 60
 Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val Gly Leu Arg Gln Lys
 65 70 75 80
 Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe Ser Arg Glu Ala Leu
 85 90 95
 Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu Leu Glu Lys Glu Arg
 100 105 110
 Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys Glu Glu Ser Glu Glu
 115 120 125
 Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val Ser Glu Glu Val Tyr
 130 135 140
 Thr Glu Glu Glu Glu Glu Glu Ser Gln Glu Glu Glu Glu Glu Asp
 145 150 155 160
 Ser Asp Glu Glu Glu Arg Thr Ile
 165

<210> 5535
 <211> 1887
 <212> DNA
 <213> Homo sapiens

<400> 5535
 ngcacgagcc gagccttctc agaccgggg gacgcctaac cccgcgagat gaggaactg
 60
 aggccgcgag agccgcacac agcagagaag cagcagaatc gggaaatcaaa cccagctctg
 120
 tctgaccca gagcctgtgc ctttaaccac tggctaggct gaactgcctt tgttcttcac
 180
 tgtecccatc acctctttca aacctcagcc tctccttctc catcggtaca tctctaggct
 240
 gcacctgtctc tctaaacatt cacacaaacc ctgcaaattt tcttctcat aattgggaga
 300
 agactcactg gccgaatggc agcagtagat gacttgcaat ttgaagaatt tggcaatgca
 360
 gccacttctc tgacagcaaa cccagatgcc accacagtaa acattgagga tcttggtgaa
 420

340 345 350
 Thr Leu Ala Tyr Tyr Gly Tyr Pro Tyr Asn Ala Leu Ile Gly Pro Asn
 355 360 365
 Arg Asp Tyr Phe Val Lys Ala Gly Ser Ile Arg Gly Arg Gly Gly
 370 375 380
 Ala Ala Gly Asn Arg Ala Pro Gly Pro Arg Gly Ser Tyr Leu Gly Gly
 385 390 395 400
 Tyr Ser Ala Gly Arg Gly Ile Tyr Ser Arg Tyr His Glu Gly Lys Gly
 405 410 415
 Lys Gln Gln Glu Lys Gly Tyr Glu Leu Val Pro Asn Leu Glu Ile Pro
 420 425 430
 Thr Val Asn Pro Val Ala Ile Lys Pro Gly Thr Val Ala Ile Pro Ala
 435 440 445
 Ile Gly Ala Gln Tyr Ser Met Phe Pro Ala Ala Pro Ala Pro Lys Met
 450 455 460
 Ile Glu Asp Gly Lys Ile His Thr Val Glu His Met Ile Ser Pro Ile
 465 470 475 480
 Ala Val Gln Pro Asp Pro Ala Ser Ala Ala Ala Ala Ala Ala Ala
 485 490 495
 Ala Ala Ala Ala Ala Ala Val Ile Pro Thr Val Ser Thr Pro Pro Pro
 500 505 510
 Phe Gln Gly Arg Pro Ile Thr Pro Val Tyr Thr Val Ala Pro Asn Val
 515 520 525
 Gln Arg Ile Pro Thr Ala Gly Ile Tyr Gly Ala Ser Tyr Val Pro Phe
 530 535 540
 Ala Ala Pro Ala Thr Ala Thr Ile Ala Thr Leu Gln Lys Asn Ala Ala
 545 550 555 560
 Ala Ala Ala Ala Val Tyr Gly Gly Tyr Ala Gly Tyr Ile Pro Gln Ala
 565 570 575
 Phe Pro Ala Ala Ala Ile Gln Val Pro Ile Pro Asp Val Tyr Gln Thr
 580 585 590
 Tyr

<210> 5533

<211> 505

<212> DNA

<213> Homo sapiens

<400> 5533

ncacttgccct ccctgectgc ttctggctgc cttgaatgcc tggctcctca agctccttct
 60
 gggctctgaca aagcaggac catgtctacc ttggctacc gaagaggact cagtaaatatc
 120
 gaatccatcg acgaggatga actcctcgcc tccctgtcag ccgaggagct gaaggagcta
 180
 gagagagagt tggaagacat tgaacctgac cgcaaccttc ccgtggggct aaggcaaaag
 240
 agcctgacag agaaaacccc cacagggaca ttcagcagag aggcactgat ggcctattgg
 300
 gaaaaggagt cccaaaaact cttggagaag gagaggctgg gggaatgtgg aaaggttgca
 360
 gaagacaaag aggaaagtga ggaagagctt atctttactg aaagtaacag tgaggtttct
 420

tactttcttcc tgggtttttg ttgggggtttg ttgtttcggt gttttttggt ttttttttgg
 3000
 tttgggtggg gaagtattgt cttctacgtg tgccattttc agtagcagag taagct
 3056

<210> 5532

<211> 593

<212> PRT

<213> Homo sapiens

<400> 5532

Met	Thr	Ala	Glu	Asp	Ser	Thr	Ala	Ala	Met	Ser	Ser	Asp	Ser	Ala	Ala	1	5	10	15
Gly	Ser	Ser	Ala	Lys	Val	Pro	Glu	Gly	Val	Ala	Gly	Ala	Pro	Asn	Glu	20	25	30	
Ala	Ala	Leu	Ala	Leu	Met	Glu	Arg	Thr	Gly	Tyr	Ser	Met	Val	Gln		35	40	45	
Glu	Asn	Gly	Gln	Arg	Lys	Tyr	Gly	Gly	Pro	Pro	Pro	Gly	Trp	Glu	Gly	50	55	60	
Pro	His	Pro	Gln	Arg	Gly	Cys	Glu	Val	Phe	Val	Gly	Lys	Ile	Pro	Arg	65	70	75	80
Asp	Val	Tyr	Glu	Asp	Glu	Leu	Val	Pro	Val	Phe	Glu	Ala	Val	Gly	Arg	85	90	95	
Ile	Tyr	Glu	Leu	Arg	Leu	Met	Met	Asp	Phe	Asp	Gly	Lys	Asn	Arg	Gly	100	105	110	
Tyr	Ala	Phe	Val	Met	Tyr	Cys	His	Lys	His	Glu	Ala	Lys	Arg	Ala	Val	115	120	125	
Arg	Glu	Leu	Asn	Asn	Tyr	Glu	Ile	Arg	Pro	Gly	Arg	Leu	Leu	Gly	Val	130	135	140	
Cys	Cys	Ser	Val	Asp	Asn	Cys	Arg	Leu	Phe	Ile	Gly	Gly	Ile	Pro	Lys	145	150	155	160
Met	Lys	Lys	Arg	Glu	Glu	Ile	Leu	Glu	Glu	Ile	Ala	Lys	Val	Thr	Glu	165	170	175	
Gly	Val	Leu	Asp	Val	Ile	Val	Tyr	Ala	Ser	Ala	Ala	Asp	Lys	Met	Lys	180	185	190	
Asn	Arg	Gly	Phe	Ala	Phe	Val	Glu	Tyr	Glu	Ser	His	Arg	Ala	Ala	Ala	195	200	205	
Met	Ala	Arg	Arg	Lys	Leu	Met	Pro	Gly	Arg	Ile	Gln	Leu	Trp	Gly	His	210	215	220	
Gln	Ile	Ala	Val	Asp	Trp	Ala	Glu	Pro	Glu	Ile	Asp	Val	Asp	Glu	Asp	225	230	235	240
Val	Met	Glu	Thr	Val	Lys	Ile	Leu	Tyr	Val	Arg	Asn	Leu	Met	Ile	Glu	245	250	255	
Thr	Thr	Glu	Asp	Thr	Ile	Lys	Lys	Ser	Phe	Gly	Gln	Phe	Asn	Pro	Gly	260	265	270	
Cys	Val	Glu	Arg	Val	Lys	Lys	Ile	Arg	Asp	Tyr	Ala	Phe	Val	His	Phe	275	280	285	
Thr	Ser	Arg	Glu	Asp	Ala	Val	His	Ala	Met	Asn	Asn	Leu	Asn	Gly	Thr	290	295	300	
Glu	Leu	Glu	Gly	Ser	Cys	Leu	Glu	Val	Thr	Leu	Ala	Lys	Pro	Val	Asp	305	310	315	320
Lys	Glu	Gln	Tyr	Ser	Arg	Tyr	Gln	Lys	Ala	Ala	Arg	Gly	Gly	Gly	Ala	325	330	335	
Ala	Glu	Ala	Ala	Gln	Gln	Pro	Ser	Tyr	Val	Tyr	Ser	Cys	Asp	Pro	Tyr				

cccagctacg tgtactcctg cgaccctac acactggcct actacggcta cccctacaac
1380
gcgctcattg ggccaacag ggactacttt gtgaaagcag gcagcataag aggccgaggg
1440
cgaggcgcag ctggcaacag agccccaggg cctaggggtt cctacctcgg gggatattct
1500
gctggccgtg gtatatatag ccgatatcat gaagggaaag gaaagcagca agaaaaagga
1560
tatgaactgg tgccgaattt ggaaatccct accgtcaacc cagttgccat taaacctggg
1620
acagtagcca tccttgccat tggggctcag tattccatgt ttccagcagc tccagccct
1680
aaaatgattg aagatggcaa aatccacaca gtggagcaca tgatcagccc cattgctgtg
1740
cagccagacc cagccagtgc tgctgccgcc gcagccggcg ccgcagccgc cgcagccgct
1800
gtcattccca ctgtgtcgac gccaccacct ttccagggcc gcccaataac tccagtatac
1860
acgggtggctc caaacgttca gagaattcct actgccggga tctacggggc cagttacgtg
1920
ccatttgctg ctccagctac agccacgatc gccacactac agaagaacgc ggcagccgcg
1980
gccgccgtgt atggaggata cgcaggctac atacctcagg ccttccctgc tgctgccatt
2040
caggtcccca tccccgacgt ctaccagaca tactgaggct ggtgaccagc acgaagacag
2100
accacacaaa caccactgaa ggaacgcttg actatttatg aagaaggaaac atgttggatt
2160
cacacatgca acctgaaagt gaagaatgtt agcagattta tttctgaatt atttatata
2220
catgaagttt tcaactagttt tttaagacta ttttcaactt agcatgccta cgttcataca
2280
tttccaaaag acttgcaatg gttcgtgcct tcattccatc ttttaaaaat ttgtatgctg
2340
tactacattt gtatagaggt ttttgttgtt gtttttttaa ggatatattt tcagtatgaa
2400
ggttattttt ttaacttctg cactccagag atttctattt tgtagtacct tcaataatat
2460
atcaactata tattaataaaa gcacacttga ggagctaggg aactattttg aaaaatatat
2520
acaatattta agatacaaaa cagtagtgct taaaaatact acataaagca ttattttaaa
2580
ggttatactg gaaagtgcaa ttttaaaatg agtaaaacct ctgtatttct gctggcatta
2640
agggttgatg gtgttaccat gtatcatcat ggcggtacta ttttttaaaa gaaattaaac
2700
actggatctc tccttaagcc aacattgaaa agacttgccg cacttctgag tccaaacact
2760
ggaaagctct cctttgccac cgttagccgg ggctcattct ccatgtgcct tagccttaaa
2820
catgccccca ctcccacatc tctcaccctg tcccctctc cccagattcc caatcccacc
2880
gcaatgtttg gcaagcctag gactgataag tagctctgat agaggagctg gtggctttta
2940

580 585 590
 Thr Ser Gly Lys Arg Thr Ile Ser Thr Gln Thr
 595 600

<210> 5531

<211> 3056

<212> DNA

<213> Homo sapiens

<400> 5531

gcccgcgcg cgtgacgctc ctgcctgcgc gcggccaagc catgctccgc cccagctcag
 60
 gtaacggagg ccttggaag agactctgcg tcagggtacc cagcagagat cagcaatcct
 120
 tggctcactg aggaggtttg gatttgcctc aaagggcact gcaaaaattg aacagaggaa
 180
 tcccaaggaa gctgcctgaa tttgcctgta tactctcgtt ctgcgactta taaaggacca
 240
 gacaaatcaa attagtgggt ttggtttccg ccagctgtgg atgcctttga cattatgacc
 300
 gcagaggatt ccaccgcagc catgagcagt gactcggccg ccgggtcctc ggccaagggtg
 360
 cccgagggcg tggcggggcg gcccaacgag gcagcactgc tggcgctgat ggagcgcacg
 420
 ggctacagca tggtgcaaga gaacgggcag cgcaagtacg gcggcccacc gcccggtggtg
 480
 gaggggccgc acccgcagcg tggtgcgag gtcttcgtgg gcaagatccc gcgcgacgtg
 540
 tacgaggacg agctggtgcc cgtgttcgag gccgtgggccc gcatctacga gctgcgcctc
 600
 atgatggact ttgacggcaa gaaccgcggc tacgccttcg tcatgtactg ccacaagcac
 660
 gaggccaagc gcgcagtgcg tgagctcaac aactacgaga tccgcccggg ccgcctgctc
 720
 ggctgtgtgt gcagcgtgga caactgccgc ctcttcacgc gcgggatccc caagatgaag
 780
 aagcgcgagg aaatcctgga ggagattgcc aaggtcaccg agggcgtgct ggacgtgatc
 840
 gtctacgcca gcgcggccga caagatgaag aaccgcggct tcgccttcgt ggagtacgag
 900
 agccaccgcg cggtgccat ggctcgcgcg aagctcatgc ctggccgcat ccagctgtgg
 960
 ggccaccaga tcgccgtgga ctgggcccag cctgagatcg acgtggacga ggacgtgatg
 1020
 gagaccgtga agatcctcta cgtgcgcaac ctcatgatcg agaccaccga ggacaccatc
 1080
 aagaagagct tcggccagtt caaccccggc tgcgtggagc gcgtcaagaa gatccgcgac
 1140
 tacgccttcg tgacttcac cagccgcgag gatgccgtgc atgcatgaa caacctcaac
 1200
 ggactgagc tggagggtc gtgcctggag gtcacgctgg ccaagcccgt ggacaaggag
 1260
 cagtactcgc gctaccagaa ggcagccagg ggcggcggcg cggctgaggc agcgcagcag
 1320

145 150 155 160
 Thr Ala Ile Pro Phe Arg Ser Arg Phe Phe Asn Leu Lys Leu Lys Asn
 165 170 175
 Gln Thr Ser Glu Arg Ser Arg Val Arg Ser Ser Asn Gln Leu Pro Arg
 180 185 190
 Ser Asn Lys Gln Leu Phe Glu Leu Leu Cys Tyr Ala Glu Ser Ile Asp
 195 200 205
 Asp Gln Leu Asn Thr Leu Leu Lys Glu Phe Gln Leu Thr Glu Glu Asn
 210 215 220
 Thr Lys Leu Arg Tyr Leu Thr Cys Ser Leu Ile Glu Asp Met Ala Ala
 225 230 235 240
 Ala Tyr Phe Pro Asp Cys Ile Val Arg Pro Phe Gly Ser Ser Val Asn
 245 250 255
 Thr Phe Gly Lys Leu Gly Cys Asp Leu Asp Met Phe Leu Asp Leu Asp
 260 265 270
 Glu Thr Arg Asn Leu Ser Ala His Lys Ile Ser Gly Asn Phe Leu Met
 275 280 285
 Glu Phe Gln Val Lys Asn Val Pro Ser Glu Arg Ile Ala Thr Gln Lys
 290 295 300
 Ile Leu Ser Val Leu Gly Glu Cys Leu Asp His Phe Gly Pro Gly Cys
 305 310 315 320
 Val Gly Val Gln Lys Ile Leu Asn Ala Arg Cys Pro Leu Val Arg Phe
 325 330 335
 Ser His Gln Ala Ser Gly Phe Gln Cys Asp Leu Thr Thr Asn Asn Arg
 340 345 350
 Ile Ala Leu Thr Ser Ser Glu Leu Leu Tyr Ile Tyr Gly Ala Leu Asp
 355 360 365
 Ser Arg Val Arg Ala Leu Val Phe Ser Val Arg Cys Trp Ala Arg Ala
 370 375 380
 His Ser Leu Thr Ser Ser Ile Pro Gly Ala Trp Ile Thr Asn Phe Ser
 385 390 395 400
 Leu Thr Met Met Val Ile Phe Phe Leu Gln Arg Arg Ser Pro Pro Ile
 405 410 415
 Leu Pro Thr Leu Asp Ser Leu Lys Thr Leu Ala Asp Ala Glu Asp Lys
 420 425 430
 Cys Val Ile Glu Gly Asn Asn Cys Thr Phe Val Arg Asp Leu Ser Arg
 435 440 445
 Ile Lys Pro Ser Gln Asn Thr Glu Thr Leu Glu Leu Leu Lys Glu
 450 455 460
 Phe Phe Glu Tyr Phe Gly Asn Phe Ala Phe Asp Lys Asn Ser Ile Asn
 465 470 475 480
 Ile Arg Gln Gly Arg Glu Gln Asn Lys Pro Asp Ser Ser Pro Leu Tyr
 485 490 495
 Ile Gln Asn Pro Phe Glu Thr Ser Leu Asn Ile Ser Lys Asn Val Ser
 500 505 510
 Gln Ser Gln Leu Gln Lys Phe Val Asp Leu Ala Arg Glu Ser Ala Trp
 515 520 525
 Ile Leu Gln Gln Glu Asp Thr Asp Arg Pro Ser Ile Ser Ser Asn Arg
 530 535 540
 Pro Trp Gly Leu Val Ser Leu Leu Leu Pro Ser Ala Pro Asn Arg Lys
 545 550 555 560
 Ser Phe Thr Lys Lys Ser Asn Lys Phe Ala Ile Glu Thr Val Lys
 565 570 575
 Asn Leu Leu Glu Ser Leu Lys Gly Asn Arg Thr Glu Asn Phe Thr Lys

actcagacat gatggctgct acattgtgta aagaactggg cttagcctat caaatggctt
 1860
 gtggacttac ttggaaaaac tgatttgaaa ctttcacaga tctcagcttt catctgatgt
 1920
 cacttttcat gatctttctca ttggccccct taacctgggc tgaagttctg ggatgttttc
 1980
 agtttgatca gtctgatact cagtggcact ttattaaaac atcagctgtg gagtgtggcg
 2040
 gtgcacacct gtagtcccag ctgctcagga ggctgaggca ggaggatctc ttgagcccag
 2100
 gattttgaat ccactgtgga caacatagca agattccatc tctaaaaaaa atgaaaataa
 2160
 acataagcca caaggaatgg gtgaaagatt attgtaatgt gctttaacta aataggtaaa
 2220
 tatactaaac aaatgctaaa actcagtttt aggatgaaac cattgttgat atccacatca
 2280
 gtcctgtttt agaaaacatt taaaatgact tttagttatg tacagtacgt tggcaatgaa
 2340
 tacattaagc ttcaaaattt ggtagtgtc tcgaatatgt atatttgtat ttttcaagcg
 2400
 aagttctctt attcacatat aaattaaagt gggttggtac tgatatcaaa aaatgtttat
 2460
 gtttttagaa cagacatttc agtcactgca ttcttaggta ttccaaacca aatatgatga
 2520
 catcaataga ttgcatttta aaaatattgt ttgatttttc tattttcaaa aataaaattc
 2580
 tgtttctaac taaaaaaaaa aa
 2602

<210> 5530

<211> 603

<212> PRT

<213> Homo sapiens

<400> 5530

Xaa	Ala	His	Leu	Leu	Trp	Gly	Gly	Lys	Gly	His	Lys	Val	Phe	Phe	Phe
1			5					10					15		
Phe	Phe	Phe	Leu	Ala	Met	Ala	Val	Pro	Gly	Val	Gly	Leu	Leu	Thr	Arg
			20					25					30		
Leu	Asn	Leu	Cys	Ala	Arg	Arg	Arg	Thr	Arg	Val	Gln	Arg	Pro	Ile	Val
	35						40					45			
Arg	Leu	Leu	Ser	Cys	Pro	Gly	Thr	Val	Ala	Lys	Asp	Leu	Arg	Arg	Asp
	50					55					60				
Glu	Gln	Pro	Ser	Gly	Ser	Val	Glu	Thr	Gly	Phe	Glu	Asp	Lys	Ile	Pro
65					70					75				80	
Lys	Arg	Arg	Phe	Ser	Glu	Met	Gln	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Gln
			85					90					95		
Arg	Thr	Val	Leu	Ile	His	Cys	Pro	Glu	Lys	Ile	Ser	Glu	Asn	Lys	Phe
			100					105					110		
Leu	Lys	Tyr	Leu	Ser	Gln	Phe	Gly	Pro	Ile	Asn	Asn	His	Phe	Phe	Tyr
		115					120					125			
Glu	Ser	Phe	Gly	Leu	Tyr	Ala	Val	Val	Glu	Phe	Cys	Gln	Lys	Glu	Ser
	130					135					140				
Ile	Gly	Ser	Leu	Gln	Asn	Gly	Thr	His	Thr	Pro	Ser	Thr	Ala	Met	Glu

cttaggagag acgagcagcc ttcagggagc gtggagacag gttttgaaga caagattccc
240
aaaaggagat tctctgagat gcaaaatgaa agacgagaac aggcacagcg gactgtttta
300
atacattgcc cagagaaaat cagtgaaaac aagtttctta aatatttatc ccaatttgga
360
cctattaata atcatttctt ctatgaaagc tttggtctct atgctgtcgt agaattttgc
420
caaaaggaaa gcatagggtc actgcagaat gggactcata ctccaagcac ggccatggag
480
actgcaattc cattcagatc acgtttcttc aatctgaagt tgaaaaacca gacttctgaa
540
cggtcacgcg tacggtcaag taatcagttg ccacgttcaa acaagcagct tttgaatta
600
ctttgttatg cagaaagtat agacgatcag ctgaacactc tcttgaagga gttccagcta
660
acagaggaga aactaagct ccgatatctc acctgttctc ttattgaaga catggccgcc
720
gcgtattttc cagactgcat agtcagaccc tttggtcctc cagtcaacac ttttggaag
780
ttaggatgtg atttggacat gtttttgat ctagatgaaa ccagaaacct cagcgctcac
840
aagatctcag gaaattttct gatggaattt caagtgaaaa atgttccttc agaaagaatt
900
gcaactcaga agatcctgtc tgtgttagga gagtgccttg accacttttg ccctggctgt
960
gtgggtgtgc aaaaaatatt aaatgcccgg tgtccgctcg tgaggttctc acaccaggcc
1020
tccgatttcc agtgtgattt gactacgaac aataggattg ccttgacaag ttccgaactc
1080
ctttatatat atgggtgccct agactcaaga gtgagagcct tgggtgttcag tgtacgggtgc
1140
tgggctcgag cacattcact aacaagtagt attcctggtg catggattac aaatttctcc
1200
cttacaatga tggatcatctt ttttctccag agaagatcac cccctattct tccaacacta
1260
gattccttaa aaaccctagc agatgcagaa gataaatgtg taatagaagg caacaactgc
1320
acatttggtc gtgacttgag tagaattaaa ccttcacaga acacagaaac attagaatta
1380
ctactgaagg aattttttga gtattttggc aattttgctt tcgataaaaa ttccataaat
1440
attcgacagg gaagggagca aaacaaacct gattcttctc ctctgtacat tcagaatcca
1500
tttgaaactt ctctcaacat aagcaaaaat gtaagtcaaa gccagctgca aaaatttgta
1560
gatttggccc gagaaagtgc ctggatttta caacaggaag atacagatcg accttccata
1620
tcaagtaatc ggccctgggg gctggtatcc ctattgctac catctgctcc aaacagaaag
1680
tcctttacca agaagaaaag caataagttt gcaattgaaa cagtcaaaaa cttgctagaa
1740
tctttaaaag gtaacagaac agaaaatttc acaaaaacca gtgggaagag aacaattagt
1800

gttggtgttcc cgagactaca ggataaaaaa tactatgata agaaatacca agtattcctg
 480
 aagctgggttg aacaccagaa ggagtatttg gcgatcatga atgatgactg aacagggctt
 540
 gcagggtgctg atgccagaag cttatgtgcc attgcattaa agacttctgt catttgatcc
 600
 atgttcaaga cccttgaggt attgtttcat catttctgta ttgtctttca ataaagaaaa
 660
 caaacatgtg caaccagaaa aaaaaaaaaa aaaaataaaa aaaaaaaaaa aaaaaaaaaa
 720
 aaaaaaaaa
 728

<210> 5528
 <211> 176
 <212> PRT
 <213> Homo sapiens

<400> 5528
 Xaa Asp Leu Thr Leu Lys Gly Met Arg Thr Thr Gly Tyr Leu Tyr Ile
 1 5 10 15
 Pro Ala Leu Ala Ala Leu His Ser Pro Ser Ser Leu Leu Ser Pro Gln
 20 25 30
 Val Thr Gly Leu Lys Leu Ser Gln Asp Leu Asp Asp Leu Ala Ile Leu
 35 40 45
 Tyr Leu Ala Thr Val Gln Ala Ile Ala Leu Gly Thr Arg Phe Ile Ile
 50 55 60
 Glu Ala Met Glu Ala Ala Gly His Ser Ile Ser Thr Leu Phe Leu Cys
 65 70 75 80
 Gly Gly Leu Ser Lys Asn Pro Leu Phe Val Gln Met His Ala Asp Ile
 85 90 95
 Thr Gly Met Pro Val Val Leu Ser Gln Glu Val Glu Ser Val Leu Val
 100 105 110
 Gly Ala Ala Val Leu Gly Ala Cys Ala Ser Gly Asp Phe Ala Ser Val
 115 120 125
 Gln Glu Ala Met Ala Lys Met Ser Lys Val Gly Lys Val Val Phe Pro
 130 135 140
 Arg Leu Gln Asp Lys Lys Tyr Tyr Asp Lys Lys Tyr Gln Val Phe Leu
 145 150 155 160
 Lys Leu Val Glu His Gln Lys Glu Tyr Leu Ala Ile Met Asn Asp Asp
 165 170 175

<210> 5529
 <211> 2602
 <212> DNA
 <213> Homo sapiens

<400> 5529
 nntgccacc ttttgtgggg ggggaaagga cacaagggtt tttttttttt ttttttttta
 60
 gcaatggcgg ttcccggcgt ggggctcttg acccgtttga acctgtgtgc ccggagaaga
 120
 actcgagtcc agcggcctat cgtcaggctt ttgagttgcc caggaactgt ggccaaagac
 180

Tyr Gln Cys Val Thr Gly Asn Asn Gly Ser Glu Ser Ser Pro Ala Thr
 945 950 955 960
 Thr Gly Ala Leu Ser Thr Gly Ser Pro Pro Arg Glu Asn Pro Ser His
 965 970 975
 Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys Asn Pro
 980 985 990
 Ser His Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys
 995 1000 1005
 Asn Pro Ser His Pro Thr Ala Ser Thr Leu Ser Met Gly Leu Pro Pro
 1010 1015 1020
 Ser Arg Thr Pro Ser His Pro Thr Ala Thr Val Leu Ser Thr Gly Ser
 1025 1030 1035 1040
 Pro Pro Ser Glu Ser Pro Ser Arg Thr Gly Ser Ala Ala Ser Gly Ser
 1045 1050 1055
 Ser Asp Ser Ser Ile Tyr Leu Thr Ser Ser Val Tyr Ser Ser Lys Ile
 1060 1065 1070
 Ser Gln Asn Gly Gln Gln Ser Gln Asp Val Gln Lys Lys Glu Thr Phe
 1075 1080 1085
 Pro Asn Val Ala Glu Glu Pro Ile Trp Arg Met Ile Arg Gln Thr Pro
 1090 1095 1100
 Glu Arg Ile Leu Met Thr Tyr Gln Val Pro Glu Arg Val Lys Glu Val
 1105 1110 1115 1120
 Val Leu Lys Glu Asp Leu Glu Lys Leu Glu Ser Met Arg Gln Gln Gln
 1125 1130 1135
 Pro Gln Phe Ser His Gly Gln Lys Glu Glu Leu Ala Lys Val Tyr Asn
 1140 1145 1150
 Trp Ile Gln Ser Gln Thr Val Thr Gln Glu Ile Asp Ile Gln Ala Cys
 1155 1160 1165
 Val Thr Cys Glu Asn Glu Asp Ser Ala Asp Gly Ala Ala Thr Ser Cys
 1170 1175 1180
 Gly Gln Val Leu Val Glu Asp Ser Cys
 1185 1190

<210> 5525

<211> 761

<212> DNA

<213> Homo sapiens

<400> 5525

nggatccaag gtgagttgtc tggcaagaga agagtaggac tctgcatacc atgcccagag
 60
 ctgagatgga ctttatctgc ctacctgcct ctgcttgctc agtgggaaca tgaggagaga
 120
 gtgggcatca gtggttctgg ggcagggtct ctcttctgag atggggatta aggaagaggg
 180
 tgagcagggg tggatgttta gggggatgcc taaattcccc agtaaggaga ccgcagataa
 240
 actcaactct gtccatctta gcagggtat gtgacctttg aggatgtggc tgtctacttc
 300
 tcccaggagg aatggagatt gcttgatgac gctcagaggc tcctctaccg caatgtgatg
 360
 ctggagaact ttacacttct ggcctctctg ggacttgcgt cttccaagac ccatgaaata
 420

Tyr Thr Glu Pro Cys Glu Asp Leu Arg Asn Asp Glu His Ser Pro Ser
 515 520 525
 Tyr Gln Gln Ile Asn Cys Ile Asp Ser Val Ile Arg Tyr Leu Lys Ser
 530 535 540
 Tyr Asn Ile Pro Ala Leu Lys Arg Lys Cys Ile Ser Cys Thr Asn Thr
 545 550 555 560
 Thr Ser Ser Ser Ser Glu Glu Asp Lys Gln Asn His Lys Ala Asp Asp
 565 570 575
 Val Gln Ala Leu Gln Gly Asn Lys Asn Ala Pro Gln Lys Met Pro Thr
 580 585 590
 Asn Gly Arg Ser Ile Asp Thr Gly Gly Gly Ala Pro Gln Ile Leu Ser
 595 600 605
 Thr Ala Met Leu Ser Leu Gly Ser Gly Ile Ser Gln Cys Gly Tyr Ser
 610 615 620
 Ser Thr Ile Val His Val Pro Pro Pro Glu Thr Ala Arg Asp Ala Thr
 625 630 635 640
 Leu Phe Cys Glu Pro Trp Thr Leu Asn Met Gln Pro Ala Pro Leu Thr
 645 650 655
 Ser Glu Glu Phe Lys His Val Gly Leu Thr Ala Ala Val Leu Ser Ala
 660 665 670
 His Thr Gln Lys Glu Glu Gln Asn Tyr Val Asp Lys Phe Arg Glu Lys
 675 680 685
 Ile Leu Ser Ser Pro Tyr Ser Ser Tyr Leu Gln Gln Glu Ser Arg Ser
 690 695 700
 Lys Ala Lys Tyr Ser Tyr Phe Gln Gly Asp Ser Thr Ser Lys Gln Thr
 705 710 715 720
 Arg Ser Ala Gly Cys Arg Lys Gly Lys His Lys Arg Lys Lys Leu Pro
 725 730 735
 Glu Pro Pro Asp Ser Ser Ser Ser Asn Thr Gly Ser Gly Pro Arg Arg
 740 745 750
 Gly Ala His Gln Asn Ala Gln Pro Cys Cys Pro Ser Ala Ala Ser Ser
 755 760 765
 Pro His Thr Ser Ser Pro Thr Phe Pro Pro Ala Ala Met Val Pro Ser
 770 775 780
 Gln Ala Pro Tyr Leu Val Pro Ala Phe Pro Leu Pro Ala Ala Thr Ser
 785 790 795 800
 Pro Gly Arg Glu Tyr Ala Ala Pro Gly Thr Ala Pro Glu Gly Leu His
 805 810 815
 Gly Pro Pro Leu Ser Glu Gly Leu Gln Pro Tyr Pro Ala Phe Pro Phe
 820 825 830
 Pro Tyr Leu Asp Thr Phe Met Thr Val Phe Leu Pro Asp Pro Pro Val
 835 840 845
 Cys Pro Leu Leu Ser Pro Ser Phe Leu Pro Cys Pro Phe Leu Gly Ala
 850 855 860
 Thr Ala Ser Ser Ala Ile Ser Pro Ser Met Ser Ser Ala Met Ser Pro
 865 870 875 880
 Thr Leu Asp Pro Pro Pro Ser Val Thr Ser Gln Arg Arg Glu Glu Glu
 885 890 895
 Lys Trp Glu Ala Gln Ser Glu Gly His Pro Phe Ile Thr Ser Arg Ser
 900 905 910
 Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Glu Glu Met Pro Arg Pro
 915 920 925
 Ser Glu Ser Pro Asp Gln Met Arg Arg Asn Thr Cys Pro Gln Thr Glu
 930 935 940

			85				90				95				
Phe	Gln	Ile	Leu	Ser	Gln	Asn	Gly	Ala	Pro	Gln	Ala	Asp	Val	Ser	Met
			100				105					110			
Tyr	Ser	Leu	Glu	Glu	Leu	Ala	Thr	Ile	Ala	Ser	Glu	His	Thr	Ser	Lys
			115				120					125			
Asn	Thr	Asp	Thr	Phe	Val	Ala	Val	Phe	Ser	Phe	Leu	Ser	Gly	Arg	Leu
			130				135				140				
Val	His	Ile	Ser	Glu	Gln	Ala	Ala	Leu	Ile	Leu	Asn	Arg	Lys	Lys	Asp
			145			150				155					160
Val	Leu	Ala	Ser	Ser	His	Phe	Val	Asp	Leu	Leu	Ala	Pro	Gln	Asp	Met
				165				170						175	
Arg	Val	Phe	Tyr	Ala	His	Thr	Ala	Arg	Ala	Gln	Leu	Pro	Phe	Trp	Asn
			180					185					190		
Asn	Trp	Thr	Gln	Arg	Ala	Ala	Arg	Tyr	Glu	Cys	Ala	Pro	Val	Lys	Pro
			195				200					205			
Phe	Phe	Cys	Arg	Ile	Arg	Gly	Gly	Glu	Asp	Arg	Lys	Gln	Glu	Lys	Cys
			210			215					220				
His	Ser	Pro	Phe	Arg	Ile	Ile	Pro	Tyr	Leu	Ile	His	Val	His	His	Pro
			225		230					235					240
Ala	Gln	Pro	Glu	Leu	Glu	Ser	Glu	Pro	Cys	Cys	Leu	Thr	Val	Val	Glu
				245					250					255	
Lys	Ile	His	Ser	Gly	Tyr	Glu	Ala	Pro	Arg	Ile	Pro	Val	Asn	Lys	Arg
			260					265					270		
Ile	Phe	Thr	Thr	Thr	His	Thr	Pro	Gly	Cys	Val	Phe	Leu	Glu	Val	Asp
			275				280					285			
Glu	Lys	Ala	Val	Pro	Leu	Leu	Gly	Tyr	Leu	Pro	Gln	Asp	Leu	Ile	Gly
			290			295					300				
Thr	Ser	Ile	Leu	Ser	Tyr	Leu	His	Pro	Glu	Asp	Arg	Ser	Leu	Met	Val
			305			310				315				320	
Ala	Ile	His	Gln	Lys	Gly	His	Pro	Pro	Phe	Glu	His	Ser	Pro	Ile	Arg
				325					330					335	
Phe	Cys	Thr	Gln	Asn	Gly	Asp	Tyr	Ile	Ile	Leu	Asp	Ser	Ser	Trp	Ser
			340					345					350		
Ser	Phe	Val	Asn	Pro	Trp	Ser	Arg	Lys	Ile	Ser	Phe	Ile	Ile	Gly	Arg
			355				360					365			
His	Lys	Val	Arg	Thr	Ser	Pro	Leu	Asn	Glu	Asp	Val	Phe	Ala	Thr	Lys
			370			375					380				
Ile	Lys	Lys	Met	Asn	Asp	Asn	Asp	Lys	Asp	Ile	Thr	Glu	Leu	Gln	Glu
			385		390					395					400
Gln	Ile	Tyr	Lys	Leu	Leu	Leu	Gln	Pro	Val	His	Val	Ser	Val	Ser	Ser
				405					410					415	
Gly	Tyr	Gly	Ser	Leu	Gly	Ser	Ser	Gly	Ser	Gln	Glu	Gln	Leu	Val	Ser
			420					425					430		
Ile	Ala	Ser	Ser	Ser	Glu	Ala	Ser	Gly	His	Arg	Val	Glu	Glu	Thr	Lys
			435				440					445			
Ala	Glu	Gln	Met	Thr	Leu	Gln	Gln	Val	Tyr	Ala	Ser	Val	Asn	Lys	Ile
			450			455				460					
Lys	Asn	Leu	Gly	Gln	Gln	Leu	Tyr	Ile	Glu	Ser	Met	Thr	Lys	Ser	Ser
			465			470			475						480
Phe	Lys	Pro	Val	Thr	Gly	Thr	Arg	Thr	Glu	Pro	Asn	Gly	Gly	Gly	Glu
				485					490					495	
Cys	Lys	Thr	Phe	Thr	Ser	Phe	His	Gln	Thr	Leu	Lys	Asn	Asn	Ser	Val
			500					505					510		

catgatgacc atcctcatag ctcagatctc ctttcaaagt agtggctttc tggatggtaa
 5220
 ttccatctta aggtgtcaga actattttca aatgctgcct ttgacagttc ttggaatttt
 5280
 ctgatattaa gcagttccat gcaaatattc gtgttttata aatagctctc atagtctgct
 5340
 ccatcttgat agttaagtga tttctgaagc gtttgtgtgt gtgttgatca ggttgtgtga
 5400
 tatttttgct tgataaagaa tcaaatttga aacaattaac cagccagtag attgtctgtc
 5460
 agtgaccttc tgtagtaata aagtttttgc cactgtaaat aaaaacagta tccgtagcta
 5520
 tcaggatcat tgcgcactca tatatgctaa gccttctggt ctctaataga agcctttctt
 5580
 ttccattggt tctggatatt tgtattatcc aaatgtgctt atttctttgc cttagcacac
 5640
 gttttatgga gtacttgta tactaggttt gatttgaaac tgggtgctgt cgcagaactg
 5700
 tcagagcatg aggagcgtc ctctgtggg tggacgcatt cagcactcc caggttgac
 5760
 ctgctgctgg cggtgagcag ggggttcagc agcttgaccg atgcccccg agggggctct
 5820
 cccagctta aactttgttg tttaaatttg ttaacttttt atattaatga ctattgaaag
 5880
 tggtaataaa aatttatatt ataggcttca atgttttcat gaatgttacc caaaaagctg
 5940
 tgttttcttt ggctcagaggt caaaatttat gaaaaacaaa atgctgtatg aatggaaatc
 6000
 attttgcaat tgagtgcac ttcattgtaa ttcacagtgt aaatttaatc caaactgaaa
 6060
 ttttgttca actgaatttg taattaactc tgaatttggt tttaatcatt agtaatat
 6120
 cagttgggta tctttttaag taaaaacaac aaataaactc tgtacatgta aaacgtgaaa
 6180
 aaaaaaaaaa
 6190

<210> 5524

<211> 1193

<212> PRT

<213> Homo sapiens

<400> 5524

Met	Pro	Arg	Gly	Glu	Ala	Pro	Gly	Pro	Gly	Arg	Arg	Gly	Ala	Lys	Asp
1				5				10					15		
Glu	Ala	Leu	Gly	Glu	Glu	Ser	Gly	Glu	Arg	Trp	Ser	Pro	Glu	Phe	His
		20						25				30			
Leu	Gln	Arg	Lys	Leu	Ala	Asp	Ser	Ser	His	Ser	Glu	Gln	Asp	Arg	
		35					40					45			
Asn	Arg	Val	Ser	Glu	Glu	Leu	Ile	Met	Val	Val	Gln	Glu	Met	Lys	Lys
		50				55					60				
Tyr	Phe	Pro	Ser	Glu	Arg	Arg	Asn	Lys	Pro	Ser	Thr	Leu	Asp	Ala	Leu
65					70					75				80	
Asn	Tyr	Ala	Leu	Arg	Cys	Val	His	Ser	Val	Gln	Ala	Asn	Ser	Glu	Phe

aaagaagacc tggaaaagct agaaagtatg aggcagcagc agccccagtt ttctcatggg
3600
caaaaaggagg agctggctaa ggtgtataat tggattcaaa gccagactgt cactcaagaa
3660
atcgacattc aagcctgtgt cacttgtgaa aatgaagatt cagctgatgg tgcggccaca
3720
tcctgtggtc aggttctggg agaagacagc tgttgagtga ctgtgaggat gaaccttcac
3780
accctttcca agacgtgtta cacagacaga cctttttaag tcctggactt ttaaagacc
3840
atgaagttat cattgaatgt taagattttt tcttcttgat tttttaatac acgtaatctt
3900
tttgaagcag acattgtata cagaatctta cttctctttg ttctgatat attaaaatgg
3960
ccagttaggc tctttttgta gttgaattgt cttctaaaga gattggatgg cctctaaaga
4020
ggtatgtgta tctttatttc agatgtcacc cagagtaaata tataattaga agtatagcta
4080
gaatgagccc caaaccttag cctcatttat tttgttctgt tacataagtc attttcccct
4140
tagagtgtt gaagaaatgc cacctacagg ttgtgtactt ttcataatgg tttccatgaa
4200
tgtagtacgt tcatacaggc ttcattcaac ctggcggtcc cctccataat taagatgaaa
4260
cattccggtt ttctcacaac acattagcac atactgtcca ttagcatatc tgggataacc
4320
agggtttggg ggttgagttt tggccttcac cctgttagat ccctttccta ttgatttccc
4380
accttcagc gaaattctga aagtcttacc ttaaaaatcg atccgcttac catgggccta
4440
ttcttgaag tttcagttag catttgcatg tgtaataatta aaatgaaaga gcttcttacc
4500
cagtgtgtt gcccttttga gtatttttgt ttttaaaata atgattgtaa aatgttttac
4560
aagtaatgta aaagctagta tcattcttac atactctgt gtttaaattt tcattcttac
4620
caaacagtt aactctttct ttccaatcaa tttatacaaa agaggtcgct ccagccctac
4680
cacaggtctg actggcactg ccttttggtt gcccttgaac agggcagtg tgtggggact
4740
gcaaaagaga aaacgtccag gcgagcccag ttgtcctcgc ccacagggc ctgcaggctc
4800
catcagtcac cgctttctat ggcgtttgta gttgtgtctt ttaagaagtg agtgtgattg
4860
ttacttgat aaatcagctc actctctggg gctttttaga gaagtcctg attccttctt
4920
aaacttgaa tgatagatga aattcacacc cctgcagatc agaaaaaaca aatagaagaa
4980
aatgagggtt acagtaacct gttgtcttta tataacttgc aacaaactaa tttatttttt
5040
tttctttttt ttgtttttgg ttttttatgg ttttttaagg aaaatacttt tctccttga
5100
agttttacag ctttttgtaa atgcgtcctg ataatgatta ggaaaatcga ccttttcac
5160

aacaagaatg cccctcagaa aatgccaaca aatggacggt ccatagacac aggaggagga
1980
gctccacaga tcctgtccac ggcgatgctg agcttggggg cgggcataag ccaatgcggt
2040
tacagcagca ccattgtcca tgtcccaccc ccagagacag ccagggatgc taccctcttc
2100
tgtgagccct ggaccctgaa catgcagcca gcccctttga cctcggaaga atttaaacac
2160
gtggggctca cagcggctgt tctgtcagcg cacaccaga aggaagagca gaattatgtt
2220
gataaattcc gagaaaagat cctgtcatca ccctacagct cctatcttca gcaagaaagc
2280
aggagcaaag ctaaattatc atattttcaa ggagattcta cttccaagca gacgcggctg
2340
gccggctgca ggaaagggaa gcacaagcgg aagaagctgc cggagccgcc agacagcagc
2400
agctcgaaca cgggctctgg tccccgcagg ggagcgcac agaacgcaca gcctgtctgc
2460
ccctccgcgg cctcctctcc gcacacctcg agcccgacct tcccacctgc cgccatgggt
2520
cccagccagg ccccttacct cgtcccagct tttcccctcc cagccgcgac ctcaccggga
2580
agagaatacg cagcccccg aactgcaccg gaaggcctgc atgggcccgc cttgtccgag
2640
ggcttgcagc cttaccagc tttccctttt ccttacttgg atacttttat gaccgttttc
2700
ctgcctgacc cccctgtctg tcctctgttg tcgccatcgt ttttgccatg tccattcctg
2760
ggggcgacag cctcttctgc gatatcacc tcaatgtcgt cagcaatgag tccaactctg
2820
gaccacccc cttcagtcac cagccaaagg agagaggagg aaaagtggga ggcacaaagc
2880
gaggggcacc cgttcattac ttcgagaagc agtcaccct tgcagttaaa cttacttcag
2940
gaagagatgc ccagaccctc tgaatctcca gatcagatga gaaggaacac gtgcccacaa
3000
actgagtatc agtgtgttac aggcaacaat ggcagtgaga gcagtctgc tactaccggt
3060
gcactgtcca cggggtcacc tcccaggag aatccatccc atcctactgc cagcgtctg
3120
tccacaggat cgcctcccat gaagaatcca tcccaccta ctgccagcg cttgtccaca
3180
ggatcgctc ccatgaagaa tccatcccat cctactgcca gcacactgtc catgggattg
3240
cctcccagca ggactccatc ccactctact gccactgttc tgtccacggg gtcacctccc
3300
agcgaatccc catccagaac tggttcagca gcacaggaa gcagcgacag cagtatatac
3360
cttactagta gtgtttatc ttctaaaatc tcccaaatg ggcagcaatc tcaggacgta
3420
cagaaaaaag aaacatttcc taatgtcgcc gaagagccca tctggagaat gatacggcag
3480
acacctgagc gcattctcat gacataccag gtacctgaga gggttaaaga agttgtacta
3540

agtgaacagc aagatcgaaa cagagtttct gaagaactta tcatggttgt ccaagaaatg
360
aaaaaatact tcccctcgga gagacgcaat aaaccaagca ctctagatgc cctcaactat
420
gctctccgct gtgtccacag cgttcaagca aacagtgagt tttccagat tctcagtcag
480
aatggagcac ctcaggcaga tgtgagcatg tacagtcttg aggagctggc cactatcgct
540
tcagaacaca cttccaaaaa cacagatacc tttgtggcag tattttcatt tctgtctgga
600
aggttagtgc acatttctga acaggctgct ttgatcctga atcgtaagaa agatgtcctg
660
gctgtcttctc actttgttga cctgcttgca cctcaagaca tgagggtatt ctacgcgcac
720
actgccagag ctcagcttcc tttctggaac aactggaccc aaagagctgc acggtatgaa
780
tgtgtccggt tgaaaccttt tttctgcagg atccgtggag gtgaagacag aaagcaagag
840
aagtgtcact cccattccg gatcatcccc tatctgattc atgtacatca cctgcccag
900
ccagaattgg aatcggaacc ttgctgtctc actgtggttg aaaagattca ctctggttat
960
gaagctcctc ggatcccagt gaataaaaga atcttcacca ccacacacac cccaggggtg
1020
gtttttcttg aagtagatga aaaagcagtg cctttgctgg gttacctacc tcaggacctg
1080
attggaacat cgatcctaag ctacctgcac cctgaagatc gttctctgat ggttgccata
1140
caccaaaaag ggcatcctcc ctttgaacat tctccattc gattttgtac tcaaaacgga
1200
gactacatca tactggattc cagttgggtc agctttgtga atccctggag ccggaagatt
1260
tctttcatca ttggtcggca taaagttcga acgagccac taaatgagga tgtttttgct
1320
accaaaatta aaaagatgaa cgataatgac aaagacataa cagaattaca agaacaaatt
1380
tacaaaacttc tcttacagcc agttcacgtg agcgtgtcca gcggctacgg gagcctggg
1440
agcagcgggt cgcaggagca gcttgtcagc atgcctcct ccagtgaggc cagtgggcac
1500
cgtgtggagg agacgaaggc ggagcagatg acctgacgc aggtctatgc cagtgtgaac
1560
aaaattaaaa atctgggtca gcagctctac attgagtcaa tgaccaaatc atcattcaag
1620
ccagtgcagg ggacacgcac agaaccgaat ggtgggtgtg aatgtaagac ctttacttcc
1680
ttccacaaa cactgaaaaa caatagtgtg tacactgagc cctgtgagga tttgaggaac
1740
gatgagcaca gccatccta tcaacagatc aactgtatcg acagtgtcat cagatacctg
1800
aagagctaca acattccagc tttgaaaaga aagtgtatct cctgtacaaa tacaacttct
1860
tcctcctcag aagaagacaa acagaaccac aaggcagatg atgtccaagc cttacaaggt
1920

145					150					155					160
Ala	Gly	Pro	Leu	His	Lys	Ile	Ile	Thr	Thr	Thr	Asn	Leu	His	Pro	Val
				165						170					175
Lys	Ile	Val	Met	Leu	Val	Asn	Glu	Asn	Pro	Leu	Leu	Thr	Glu	Glu	Ala
			180					185					190		
Ala	Leu	Asn	Lys	Cys	Tyr	Arg	Val	Met	Asp	Leu	Ile	Cys	Glu	Lys	Cys
		195					200					205			
Met	Lys	Gln	Arg	Asp	Met	Asn	Glu	Val	Leu	Ala	Met	Lys	Met	His	Tyr
	210					215					220				
Ile	Ser	Cys	Ile	Phe	Gln	Lys	Cys	Ile	Asn	Phe	Leu	Lys	Asp	Gly	Glu
225					230					235					240
Asn	Lys	Leu	Asp	Thr	Leu	Ile	Lys	Ser	Leu	Leu	Lys	Gly	Arg	Ala	Ser
			245					250						255	
Asp	Gly	Phe	Pro	Val	Tyr	Gln	Glu	Lys	Ile	Ile	Arg	Glu	Ser	Ile	Arg
		260						265					270		
Lys	Phe	Pro	Tyr	Cys	Glu	Ala	Thr	Leu	Leu	Gln	Gln	Leu	Val	Arg	Ser
	275						280					285			
Ile	Ala	Pro	Val	Glu	Ile	Gly	Ser	Asp	Pro	Thr	Ala	Phe	Ser	Val	Leu
	290					295					300				
Thr	Gln	Ala	Ile	Thr	Gly	Gln	Val	Gly	Phe	Val	Asp	Val	Glu	Phe	Cys
305					310					315					320
Thr	Thr	Cys	Gly	Glu	Lys	Gly	Ala	Ser	Lys	Arg	Cys	Ser	Val	Cys	Lys
			325					330						335	
Met	Val	Ile	Tyr	Cys	Asp	Gln	Thr	Cys	Gln	Lys	Thr	His	Trp	Phe	Thr
		340					345					350			
His	Lys	Lys	Ile	Cys	Lys	Asn	Leu	Lys	Asp	Ile	Tyr	Glu	Lys	Gln	Gln
	355						360				365				
Leu	Glu	Ala	Ala	Lys	Glu	Lys	Arg	Gln	Glu	Glu	Asn	His	Gly	Lys	Leu
	370					375					380				
Asp	Val	Asn	Ser	Asn	Cys	Val	Asn	Glu	Glu	Gln	Pro	Glu	Ala	Glu	Val
385					390					395					400
Gly	Ile	Ser	Gln	Arg	Asp	Ser	Asn	Pro	Glu	Asp	Ser	Gly	Glu	Gly	Lys
			405					410						415	
Lys	Glu	Ser	Leu	Glu	Ser	Glu	Ala	Glu	Leu	Glu	Gly	Leu	Gln	Asp	Ala
		420					425						430		
Pro	Ala	Gly	Pro	Gln	Val	Ser	Glu	Glu							
	435						440								

```
<210> 5523
<211> 6190
<212> DNA
<213> Homo sapiens
```

```
<400> 5523
naaaacctcc tgggaaataa ccgtgacccc ctggctcgtg ggggccgcct gttctcacta
60
acgccatggc ggggaccgga gtgagaaacc ggtgtctgtc actgactgca aagtgagcga
120
gaagcaggct gcgggccgtc ccagcacgac gtggagcccc gcggagacct cgagatgcc
180
cgcggggaag ctcttgccc cgggagacgg ggggctaagg acgaggccct gggcgaagaa
240
tcgggggagc ggtggagccc cgagttccat ctgcagagga aattggcgga cagcagccac
300
```

atacaggaaa aacataccta ttacctttct gaggctggct ttccagcaat tgtttcaaag
 1800
 gaaaatagat ccccttaaag aaaaaataca ggctttaggg aacaaagggg caagcagaac
 1860
 aggtgtggaa gagagatttt caggaagggg aaaatttata gctacagagg gtagttagaa
 1920
 aaatcataac ttatatgtga ataaaaataca tataagcagc atttacggta gtggcattct
 1980
 acttattaag atgcaatgaa atgaagaaag gctttatgtt caaggacctt tgccatagtt
 2040
 cagctaattg tagttttata tagaaatgat cctgaacact ctgaacttga cgtagtccctg
 2100
 cggatgatt ctatctgcag tatttgtacc tccagaatgg cagatccctc agcaggaaca
 2160
 aaggcatatt gacggttctc tcagcgtatg cattaataaaa ggtacttccct gaaacttttg
 2220
 attcaataat gactaaacat actatgtaca caattactgt aaggctaatt cacgtgccat
 2280
 acgccacctg aaagcctgag ttatcttgct ataagctttt catggagcac ttcctttcca
 2340
 gaaactgatt tgtaactcat ttagagaatg tcctggcgtc ggtttttagc atatgtggta
 2400
 tttaaacaga gctagaatgt gatgtctgaa gataatgctg catttctggg tttcttgtgt
 2460
 ggattttaaa ataaattgtg cctacaaata taaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2520
 aaaa
 2524

<210> 5522

<211> 441

<212> PRT

<213> Homo sapiens

<400> 5522

Met	Val	His	Ile	Lys	Lys	Gly	Glu	Leu	Thr	Gln	Glu	Glu	Lys	Glu	Leu
1				5					10					15	
Leu	Glu	Val	Ile	Gly	Lys	Gly	Thr	Val	Gln	Glu	Ala	Gly	Thr	Leu	Leu
			20					25					30		
Ser	Ser	Lys	Asn	Val	Arg	Val	Asn	Cys	Leu	Asp	Glu	Asn	Gly	Met	Thr
		35					40					45			
Pro	Leu	Met	His	Ala	Ala	Tyr	Lys	Gly	Lys	Leu	Asp	Met	Cys	Lys	Leu
	50					55					60				
Leu	Leu	Arg	His	Gly	Ala	Asp	Val	Asn	Cys	His	Gln	His	Glu	His	Gly
65				70						75					80
Tyr	Thr	Ala	Leu	Met	Phe	Ala	Ala	Leu	Ser	Gly	Asn	Lys	Asp	Ile	Thr
			85					90						95	
Trp	Val	Met	Leu	Glu	Ala	Gly	Ala	Glu	Thr	Asp	Val	Val	Asn	Ser	Val
			100					105					110		
Gly	Arg	Thr	Ala	Ala	Gln	Met	Ala	Ala	Phe	Val	Gly	Gln	His	Asp	Cys
		115				120						125			
Val	Thr	Ile	Ile	Asn	Asn	Phe	Phe	Pro	Arg	Glu	Arg	Leu	Asp	Tyr	Tyr
	130				135						140				
Thr	Lys	Pro	Gln	Gly	Leu	Asp	Lys	Glu	Pro	Lys	Leu	Pro	Pro	Lys	Leu

acagacgcat cgtttctttt ttaatactcc ctaagaaagg gaataacctt caagctggcg
180
ggagcaatgg ttcacataaa gaaaggcgag ctgacccagg aggagaagga gctactggaa
240
gtcatcggga aaggctactgt ccaagaagct ggaacattat tatccagcaa gaatgttcgt
300
gtcaactgtt tggacgagaa tggaaatgact cctctaagtc atgcagcata taaaggaaaa
360
ctcgatatgt gcaaattact actgcgacat ggagccgatg taaattgtca tcagcatgaa
420
catggataca cagccctcat gtttgctgca ctttctggta ataaagacat cacatgggta
480
atgttagagg ctggtgctga gacagatgtt gtcaactctg tgggaagaac agcagctcag
540
atggcagcct ttgtgggtca acatgattgt gtgaccataa tcaacaattt ctttcctcga
600
gagagactgg attattacac taagccccag ggactggata aagagccaaa actgccccca
660
aagttggcag gcccgctgca caaaattatc accacaacga atcttcatcc tgtcaagatc
720
gtgatgcttg taaatgagaa tcctctgctg acagaagaag cagccctgaa taaatgctac
780
agagtgatgg atttgatttg tgagaaatgt atgaagcaaa gagacatgaa tgaagtattg
840
gctatgaaga tgcattacat aagctgtatc ttccagaaat gcattaactt cttaaaagat
900
ggagagaata aactggacac cttgatcaaa agcttgctaa aaggccgagc ttctgatggc
960
tttccagtgt atcaagaaaa gatcattaga gaaagtatca gaaaatttcc atactgtgaa
1020
gccacactcc tacagcagct ggtgcgaagc atcgctccag ttgaaattgg ttctgatccc
1080
actgcattct ccgtccttac ccaagccatc actggccagg tgggttttgt ggatgtggaa
1140
ttttgcacta cctgtggaga aaaggggagca agtaaaagat gtccagtttg caaaatggta
1200
atatattgtg atcaaacctg ccagaaaaca cactggttta ctcataagaa aatctgtaag
1260
aatctgaagg acatttacga aaagcaacag ttggaggctg ccaaagaaaa gagacaagag
1320
gaaaaccacg gcaaacttga tgtcaattct aactgtgtta atgaagagca accagaggct
1380
gaagtaggta tctctcaaag ggattccaat cctgaagatt ccggggaagg aaagaaagaa
1440
tctcttgaaa gcgaagctga gttggaaggc ttacaggatg ctccctgcagg gccacagggtg
1500
tctgaggagt aaaagccaga gcaagtgccg gtgtggatgg tcctcaccct gcaagaagct
1560
ggaaaactcc taggaatgca ttgtcctcac cttgttatac ctgcgtggca ccatggcagg
1620
attccacatt tcatagaata cagggtttca agcaaaccct tgttgaccat gccctaattt
1680
cctattgatt tctgttctat gattgaatgg atattcctat ggaaaatttt ttgtttcaaa
1740

85

<210> 5519
 <211> 401
 <212> DNA
 <213> Homo sapiens

<400> 5519
 ctccataaca tccattttcc tattatgagc agaggaaata aacatgcaga tggcttggtt
 60
 tccttcgcat aacttgtaga ggggtaggta gcataaaaga cagccgtct caagaagcaa
 120
 ccattgcct cactacttac catgttcctg cgggcattcc cctcccgaag ggagtctctg
 180
 aaaacaaaaca cacacagaag ttggcgctgg gcaccacatt ctcctcttga cctaaccatc
 240
 aggaatttgc tgtgccatct gttcataaaa cttagccagg ccagaaagc ttgtcccaac
 300
 cacatgctaa gagccaagca gatggaacag aagctcccc aagctgctgg ctcccactat
 360
 ggctgggatg aagcaagaac ctgggcccac acaggctgca a
 401

<210> 5520
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 5520
 Met Trp Leu Gly Gln Ala Phe Trp Ala Trp Leu Ser Phe Met Asn Arg
 1 5 10 15
 Trp His Ser Lys Phe Leu Met Val Arg Ser Arg Gly Glu Cys Gly Ala
 20 25 30
 Gln Arg Gln Leu Leu Cys Val Phe Val Phe Arg Asp Ser Leu Arg Glu
 35 40 45
 Gly Asn Ala Arg Arg Asn Met Val Ser Ser Glu Ala His Gly Cys Phe
 50 55 60
 Leu Arg Pro Ala Val Phe Tyr Ala Thr Tyr Pro Cys Thr Ser Tyr Ala
 65 70 75 80
 Lys Glu Thr Lys Pro Ser Ala Cys Leu Phe Pro Leu Leu Ile Ile Gly
 85 90 95
 Lys Trp Met Leu Trp
 100

<210> 5521
 <211> 2524
 <212> DNA
 <213> Homo sapiens

<400> 5521
 ngggggagct cgcccgtgt ccgccagccc gcgggagggg ggagagaagc gaagcgtttc
 60
 cgcggttggc tactcagtgt cttggtctca agttgcctca ttgcggctgg cgttcccaat
 120

115

120

<210> 5517
 <211> 804
 <212> DNA
 <213> Homo sapiens

<400> 5517
 nctgtatggc caaagcacia aggggaaggat ccgcaattta cattcttgga gctatcatct
 60
 gtactgtact gttgtgatct actgattggc attggcatag tagtaggggc aagtgcacaga
 120
 atccgtgcca gcagtcacca ggttcagaag caattcaaga ccctgatgat agctctccag
 180
 caaccaacac atggtgacat ggtgattgtg ccaacttgtt gctcagttat atgcagggcc
 240
 agtgattggt ttaagtgaag accatggttg agatcatttg tctttggtct aatagaattt
 300
 gagctagtag aatttgagtc tccagggaaa gagctacttg accaaattaa actagtagca
 360
 ggtagagcat gaatgcagc atattatacc atcaagatgt tcttagagca gtgtatggat
 420
 ggatcgattg tactgccatc agttgtgact gacgttgtat tcaaggagaa agagaaactt
 480
 gtttagaaaag cactttgaaa gttttttgag tacgggggtg ccctgtatca ccccgttatg
 540
 gttgaacttt ctcttcaaa attaccagac ttggcagcag tggcaaatta ttgggctaaa
 600
 agacttaatc agacatattc tgggttcaag gctcctaata taatacctgg tgcaaacatt
 660
 atacttcac tcattcagat ggttgcaccc tgccaggcat ccagtgggac tgggaatatg
 720
 gacacttgaa cattaacat cctgaagaat tttggaatga caggttacaa gtgaacataa
 780
 tcagttctct atattaaaaa aaaa
 804

<210> 5518
 <211> 85
 <212> PRT
 <213> Homo sapiens

<400> 5518
 Xaa Val Trp Pro Lys His Lys Gly Lys Asp Pro Gln Phe Thr Phe Leu
 1 5 10 15
 Glu Leu Ser Ser Val Leu Tyr Cys Cys Asp Leu Leu Ile Gly Ile Gly
 20 25 30
 Ile Val Val Gly Ser Ser Asp Arg Ile Arg Ala Ser Ser Leu Gln Val
 35 40 45
 Gln Lys Gln Phe Lys Thr Leu Met Ile Ala Leu Gln Gln Pro Thr His
 50 55 60
 Gly Asp Met Val Ile Val Pro Thr Cys Cys Ser Val Ile Cys Arg Ala
 65 70 75 80
 Ser Asp Trp Phe Lys

```

                165                170                175
Pro Cys Val Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro
                180                185                190
Leu Pro Val Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp
                195                200                205
Ser Ser Leu Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu
                210                215                220
Ser Glu Gly Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp
                225                230                235                240
Glu Ala Val Ser Leu Asp Asp Ala
                245

```

<210> 5515

<211> 420

<212> DNA

<213> Homo sapiens

<400> 5515

```

gtttgtacca accccctctc catccttgaa gcagtcattgg ccactgcaa gaaaatgcaa
60
gaaaggatgt ccgcacagct ggctgctgct gagagcagac aaaagaagct ggaaatggag
120
aagcttcagc tacaagccct tgagcaagag cacaagaagc tggctgcccg ccttgaggaa
180
gagcgtggca agaacaagca ggtggctctg atgctgggtca aagagtgcga gcagctctca
240
agcaaagtca tagaggagga ccagaagctc gaagacgtaa tggccaaact ggcttcttct
300
ctttgtcacc agcacctgct tcatagtctc tctggagtgc caggaacggg tcatatagat
360
taaatctccc ataccgttcc tggataaata cctccttctc gcgagcccgc agggcctcga
420

```

<210> 5516

<211> 120

<212> PRT

<213> Homo sapiens

<400> 5516

```

Val Cys Thr Asn Pro Leu Ser Ile Leu Glu Ala Val Met Ala His Cys
1      5      10      15
Lys Lys Met Gln Glu Arg Met Ser Ala Gln Leu Ala Ala Ala Glu Ser
20     25     30
Arg Gln Lys Lys Leu Glu Met Glu Lys Leu Gln Leu Gln Ala Leu Glu
35     40     45
Gln Glu His Lys Lys Leu Ala Ala Arg Leu Glu Glu Glu Arg Gly Lys
50     55     60
Asn Lys Gln Val Val Leu Met Leu Val Lys Glu Cys Lys Gln Leu Ser
65     70     75     80
Ser Lys Val Ile Glu Glu Ala Gln Lys Leu Glu Asp Val Met Ala Lys
85     90     95
Leu Ala Ser Ser Leu Cys His Gln His Leu Leu His Ser Leu Ser Gly
100    105    110
Val Pro Gly Thr Gly His Ile Asp

```

aaggccacag ccgcggccct gggcagtttc ccggcagggtg gcccggccga gctgtcgtg
120
agactcgggg agccattgac catcgtctct gaggatggag actggtggac ggtgctgtct
180
gaagtctcag gcagagagta taacatcccc agcgtccacg tggccaaagt ctcccatggg
240
tggctgtatg agggcctgag cagggagaaa gcagaggacc tgctgttgtt acctgggaac
300
cctggagggg ctttctcat ccgggagagc cagaccagga gaggtcttta ctctctgtca
360
gtccgcctca gccgcctgc atcctgggac cggatcagac actacaggat cactgcctt
420
gacaatggct ggctgtacat ctcaccgcgc ctcaccttc cctcactcca ggcctgggtg
480
gaccattact ctgagctggc ggatgacatc tgctgcctac tcaaggagcc ctgtgtcctg
540
cagagggctg gcccgctccc tggcaaggat ataccctac ctgtgactgt gcagaggaca
600
ccactcaact ggaagagct ggacagctcc ctctgtttt ctgaagctgc cacaggggag
660
gagtctcttc tcagtggagg tctccgggag tccctcagct tctacatcag cctgaatgac
720
gaggctgtct ctttggatga tgcctaggcc caaaggagag gccaaaaggg aaaccaaggc
780
tgcacaccta gaacccaat tcagcctcct gggcaccca gaggcaaggc tgtgcac
837

<210> 5514

<211> 248

<212> PRT

<213> Homo sapiens

<400> 5514

Xaa	Ser	Leu	Ser	Ser	Ser	Val	Gln	Gly	Gln	Gly	Pro	Val	Thr	Met	Glu
1				5					10					15	
Ala	Glu	Arg	Ser	Lys	Ala	Thr	Ala	Ala	Ala	Leu	Gly	Ser	Phe	Pro	Ala
			20				25						30		
Gly	Gly	Pro	Ala	Glu	Leu	Ser	Leu	Arg	Leu	Gly	Glu	Pro	Leu	Thr	Ile
			35				40						45		
Val	Ser	Glu	Asp	Gly	Asp	Trp	Trp	Thr	Val	Leu	Ser	Glu	Val	Ser	Gly
	50					55					60				
Arg	Glu	Tyr	Asn	Ile	Pro	Ser	Val	His	Val	Ala	Lys	Val	Ser	His	Gly
65					70					75				80	
Trp	Leu	Tyr	Glu	Gly	Leu	Ser	Arg	Glu	Lys	Ala	Glu	Asp	Leu	Leu	Leu
			85					90						95	
Leu	Pro	Gly	Asn	Pro	Gly	Gly	Ala	Phe	Leu	Ile	Arg	Glu	Ser	Gln	Thr
			100				105							110	
Arg	Arg	Gly	Ser	Tyr	Ser	Leu	Ser	Val	Arg	Leu	Ser	Arg	Pro	Ala	Ser
			115				120					125			
Trp	Asp	Arg	Ile	Arg	His	Tyr	Arg	Ile	His	Cys	Leu	Asp	Asn	Gly	Trp
	130					135					140				
Leu	Tyr	Ile	Ser	Pro	Arg	Leu	Thr	Phe	Pro	Ser	Leu	Gln	Ala	Leu	Val
145					150					155				160	
Asp	His	Tyr	Ser	Glu	Leu	Ala	Asp	Asp	Ile	Cys	Cys	Leu	Leu	Lys	Glu

85 90 95
 His Ser Gly Glu Asn Leu Tyr Glu Cys
 100 105

<210> 5511
 <211> 379
 <212> DNA
 <213> Homo sapiens

<400> 5511
 tccggagtgt cacaggcctc agccacaagg ctttcctgat tgggctccac atctgcagaa
 60
 ccttccttgg gaaaagaggg catcgtctca atcgcatagt cacacacatc ccttaactca
 120
 ctctgctgag ttgctgagag tctgtgttcc tctctccact tataggatgg gtcctcatct
 180
 tcttgagctt caagcccca ggcagagacc tggtgtctcc tcatgggagc ctcagggata
 240
 atgtgaatt cctctatggc agagatggga ggagaggctc cacgctgggc ctcctcagcc
 300
 tccatcaggg ctgaatcctg gtcggtgtca catgctgctt cggccccagc gtccctcca
 360
 ggtcccggcg ccggccgcn
 379

<210> 5512
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 5512
 Met Glu Ala Glu Glu Ala Gln Arg Gly Ala Ser Pro Pro Ile Ser Ala
 1 5 10 15
 Ile Glu Glu Phe Ser Ile Ile Pro Glu Ala Pro Met Arg Ser Ser Gln
 20 25 30
 Val Ser Ala Leu Gly Leu Glu Ala Gln Glu Asp Glu Asp Pro Ser Tyr
 35 40 45
 Lys Trp Arg Glu Glu His Arg Leu Ser Ala Thr Gln Gln Ser Glu Leu
 50 55 60
 Arg Asp Val Cys Asp Tyr Ala Ile Glu Thr Met Pro Ser Phe Pro Lys
 65 70 75 80
 Glu Gly Ser Ala Asp Val Glu Pro Asn Gln Glu Ser Leu Val Ala Glu
 85 90 95
 Ala Cys Asp Thr Pro
 100

<210> 5513
 <211> 837
 <212> DNA
 <213> Homo sapiens

<400> 5513
 nnaagcttga gttcctctgt ccaaggccag ggacctgtga ccatggaagc agagagaagc
 60

435

440

445

<210> 5509

<211> 818

<212> DNA

<213> Homo sapiens

<400> 5509

ccactgtgtg aagagaaatt aggggtgaccc aggcagtaca tctactccc tggacccacc
60
aaggagagct gtatttgtgt ttcattggtt ctttaccaaa taattctagc atcggaattg
120
ctatgtgaga ggaagtaagt atacacagcg taagaggtgt gataaccaag tcatagaaga
180
aatgttttga gaacatggaa tcatgtgaac ttattatgtg gtaagtacag ataccaggg
240
ctgtcagtct caccatcctt ttctacacat gtggatgctt caggactcca gcctttgagg
300
atgtggcttt caacttcacc ctacaggaaa ggtagtcaat gtggagaagc cttcagccag
360
attccaggtc ataattctgaa taagaaaacg cctcctggag taaagccacc tgaaagccat
420
gtgtgtggag aggtcggcgt gggctatcca tccactgaaa ggcacatcag agatcgcctt
480
ggacgcaaac cctgtgaata tcaggaatgt agacagaagg catatacatg taagccatgt
540
gggaatgcct ttcgttttca ccactccttt cacatacacg aaaggcctca cagtggagaa
600
aacctctatg aatgttagga atttcagaaa acattcactt ccccccaaa ctttcaaaga
660
tgtgaaaatg catagtggag atggacctta caaatgcaag gtgggtagga aaacctttga
720
ctctcccagt tcatttcgaa tacatggaag atctcattct ggagagaaac ccaatgtgtg
780
taggcactgt gggagcacct acaatcattt cagttttg
818

<210> 5510

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5510

Met Trp Leu Ser Thr Ser Pro Tyr Arg Lys Gly Ser Gln Cys Gly Glu
1 5 10 15
Ala Phe Ser Gln Ile Pro Gly His Asn Leu Asn Lys Lys Thr Pro Pro
20 25 30
Gly Val Lys Pro Pro Glu Ser His Val Cys Gly Glu Val Gly Val Gly
35 40 45
Tyr Pro Ser Thr Glu Arg His Ile Arg Asp Arg Leu Gly Arg Lys Pro
50 55 60
Cys Glu Tyr Gln Glu Cys Arg Gln Lys Ala Tyr Thr Cys Lys Pro Cys
65 70 75 80
Gly Asn Ala Phe Arg Phe His His Ser Phe His Ile His Glu Arg Pro

1	5	10	15
Leu Asp Pro Tyr Thr Glu Leu Arg Lys Gln Pro Leu Arg Lys Tyr Val			
20	25	30	
Thr Pro Ser Asp Phe Asp Gln Leu Lys Gln Phe Leu Thr Phe Asp Lys			
35	40	45	
Gln Val Leu Arg Phe Tyr Ala Ile Trp Asp Asp Thr Asp Ser Met Tyr			
50	55	60	
Gly Glu Cys Arg Thr Tyr Ile Ile His Tyr Tyr Leu Met Asp Asp Thr			
65	70	75	80
Val Glu Ile Arg Glu Val His Glu Arg Asn Asp Gly Arg Asp Pro Phe			
85	90	95	
Pro Leu Leu Met Asn Arg Gln Arg Val Pro Lys Val Leu Val Glu Asn			
100	105	110	
Ala Lys Asn Phe Pro Gln Cys Val Leu Glu Ile Ser Asp Gln Glu Val			
115	120	125	
Leu Glu Trp Tyr Thr Ala Lys Asp Phe Ile Val Gly Lys Ser Leu Thr			
130	135	140	
Ile Leu Gly Arg Thr Phe Phe Ile Tyr Asp Cys Asp Pro Phe Thr Arg			
145	150	155	160
Arg Tyr Tyr Lys Glu Lys Phe Gly Ile Thr Asp Leu Pro Arg Ile Asp			
165	170	175	
Val Ser Lys Arg Glu Pro Pro Pro Val Lys Gln Glu Leu Pro Pro Tyr			
180	185	190	
Asn Gly Phe Gly Leu Val Glu Asp Ser Ala Gln Asn Cys Phe Ala Leu			
195	200	205	
Ile Pro Lys Ala Pro Lys Lys Asp Val Ile Lys Met Leu Val Asn Asp			
210	215	220	
Asn Lys Val Leu Arg Tyr Leu Ala Val Leu Glu Ser Pro Ile Pro Glu			
225	230	235	240
Asp Lys Asp Arg Arg Phe Val Phe Ser Tyr Phe Leu Ala Thr Asp Met			
245	250	255	
Ile Ser Ile Phe Glu Pro Pro Val Arg Asn Ser Gly Ile Ile Gly Gly			
260	265	270	
Lys Tyr Leu Gly Arg Thr Lys Val Val Lys Pro Tyr Ser Thr Val Asp			
275	280	285	
Asn Pro Val Tyr Tyr Gly Pro Ser Asp Phe Phe Ile Gly Ala Val Ile			
290	295	300	
Glu Val Phe Gly His Arg Phe Ile Ile Leu Asp Thr Asp Glu Tyr Val			
305	310	315	320
Leu Lys Tyr Met Glu Ser Asn Ala Ala Gln Tyr Ser Pro Glu Ala Leu			
325	330	335	
Ala Ser Ile Gln Asn His Val Arg Lys Arg Glu Ala Pro Ala Pro Glu			
340	345	350	
Ala Glu Ser Lys Gln Thr Glu Lys Asp Pro Gly Val Gln Glu Leu Glu			
355	360	365	
Ala Leu Ile Asp Thr Ile Gln Lys Gln Leu Lys Asp His Ser Cys Lys			
370	375	380	
Asp Asn Ile Arg Glu Ala Phe Gln Ile Tyr Asp Lys Glu Ala Ser Gly			
385	390	395	400
Tyr Val Asp Arg Asp Met Phe Phe Lys Ile Cys Glu Ser Leu Asn Val			
405	410	415	
Pro Val Asp Asp Ser Leu Val Lys Glu Leu Ile Arg Met Cys Ser His			
420	425	430	
Gly Glu Gly Lys Ile Asn Tyr Tyr Asn Phe Val Arg Ala Phe Ser Asn			

aaccgccagc gtgtgccc aa agttttggtg gaaaatgcaa agaacttccc tcagtgtgtg
360
ctagaaatct ctgaccaaga agtggttgaa tggatatactg ctaaagactt cattgttggtg
420
aagtcactca ctatccttgg gagaactttc ttcatttatg attgtgatcc atttactcga
480
cggatttaca aagagaagtt tggatcact gatttaccac gtattgatgt gagcaagcgg
540
gaaccacctc cagtaaaaca ggagttgect ccttataacg gttttggact agtggaagat
600
tctgctcaga attgttttgc tctcattcca aaagctccaa aaaaagacgt tattaaaatg
660
ctggtgaatg ataacaaggt gcttcgttat ttggtgttac tggatcccc catcccagaa
720
gacaaagacc gcagatttgt cttctcttac tttctagcta ccgacatgat cagtatcttt
780
gagcctcctg ttcgcaattc tggatcatt gggggcaagt accttggcag gactaaagtt
840
gttaaaccat actctacagt ggacaaccct gtctactatg gccccagtga cttcttcatt
900
ggtgctgtga ttgaagtgtt tggtcaccgg ttcatcatcc ttgatacaga cgagtatgtt
960
ttgaaataca tggagagcaa cgctgccag tattcaccag aagcactcgc gtcaattcag
1020
aaccatgtcc gaaagcgaga agcgctgct ccagaagcag aaagcaagca aactgaaaag
1080
gatccaggcg tgcaggaatt ggaagcatta atagacacaa ttcagaagca actgaaagat
1140
cactcatgca aagacaacat tcgtgaggca tttcaaattt atgacaagga agcttcagga
1200
tatgtggaca gagacatggt ctttaaaatc tgtgaatcgc ttaacgtccc agtggatgac
1260
tccttggtta aggagttaat caggatgtgc tctcatggag aaggcaaaat taactactat
1320
aactttgttc gtgctttctc aaactgacct gctgatgaga aaatgcaaga caatttttga
1380
tactggaact atgctttgaa atacacctta cactcttcatt agaggcattt acagggttcc
1440
tgaagtttta tttctgtttt ggttcttatt tctctctac tgaagtcgaa actaaattgg
1500
atctaatagg atctaagatt ggtgccttat ttaggggtgat aggggtatag caatgtctaa
1560
ttttgtgtgt caaattgact tggccacagg gggcccaaatt atttcctttc tttcttttta
1620
aaaaataaaa ttttttttga gatgggaaaa aaaaaaaa
1658

<210> 5508

<211> 448

<212> PRT

<213> Homo sapiens

<400> 5508

Xaa Leu Glu Ser Gln Gly Ile Glu Leu Asn Pro Pro Glu Lys Met Ala

<400> 5506

Lys Leu Gly Arg Pro Ser Gly Ser Cys Arg Gly Gly Arg Ala Gln Leu
 1 5 10 15
 Gln Glu Gly Val Gln Lys Pro Gln Ala Met Ala Val Gly Asn Ile Asn
 20 25 30
 Glu Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala
 35 40 45
 Arg Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp
 50 55 60
 Leu Ile Asp Leu Val Thr Leu Trp Lys Arg Lys Cys Leu Arg Glu Gly
 65 70 75 80
 Phe Ile Thr Glu Asp Trp Asp Gln Pro Val Ala Asp Trp Lys Ile Phe
 85 90 95
 Tyr Phe Leu Arg Ser Leu His Arg Asn Leu Leu His Asn Pro Cys Ala
 100 105 110
 Glu Glu Gly Phe Glu Phe Trp Ser Leu Asp Val Asn Gly Gly Asp Glu
 115 120 125
 Trp Lys Val Glu Asp Leu Ser Arg Asp Gln Arg Lys Glu Phe Pro Asn
 130 135 140
 Asp Gln Val Lys Lys Tyr Phe Val Thr Ser Tyr Tyr Thr Cys Leu Lys
 145 150 155 160
 Ser Gln Val Val Asp Leu Lys Ala Glu Gly Tyr Trp Glu Glu Leu Leu
 165 170 175
 Asp Thr Phe Arg Pro Asp Ile Val Val Lys Asp Trp Phe Ala Ala Arg
 180 185 190
 Ala Asp Cys Gly Cys Thr Tyr Gln Leu Lys Val Gln Leu Leu Ser Ala
 195 200 205
 Asp Tyr Phe Val Leu Ala Ser Phe Glu Pro Asp Pro Ala Thr Ile Gln
 210 215 220
 Gln Lys Ser Asp Ala Lys Trp Arg Glu Val Ser His Thr Phe Ser Asn
 225 230 235 240
 Tyr Pro Pro Gly Val Arg Tyr Ile Trp Phe Gln His Gly Gly Val Asp
 245 250 255
 Thr His Tyr Trp Ala Gly Trp Tyr Gly Pro Arg Val Thr Asn Ser Ser
 260 265 270
 Ile Thr Ile Gly Pro Pro Leu Pro
 275 280

<210> 5507

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 5507

ntttttagaaa gccaaaggaat tgagttaaat ccaccagaga agatggctct tgatccttac
 60
 actgaactcc gaaaacagcc tcttcgtaag tatgtcacc catcagactt tgatcaactc
 120
 aagcaatttc tcacctttga caaacaggtc cttcgattct atgcaatctg ggatgataca
 180
 gacagcatgt atggtgaatg tcggacctac atcattcatt actatcttat ggatgatagc
 240
 gtggaaattc gagaggcca cgaacggaat gatgggagag atcctttccc actcctaagt
 300

370 375 380
 Pro Cys Gly Ser Trp Gly Thr Arg
 385 390

<210> 5505
 <211> 1099
 <212> DNA
 <213> Homo sapiens

<400> 5505
 aagcttgggc ggcccagcgg atcgtgccgc ggcggccgag cgcagctaca ggaggggtgtc
 60
 cagaagccac aagccatggc tgtggggaac atcaacgagc tgcccagaaa catcctgctg
 120
 gagctgttca cgcacgtgcc cgcccggcag ctgctgctga actgccgcct ggtctgcagc
 180
 ctctggcggg acctcatcga cctcgtgacc ctctggaac gcaagtgcct gcgagagggc
 240
 ttcatactg aggactggga ccagcccgtg gccgactgga agatcttcta cttcttacgg
 300
 agcctgcaca ggaacctcct gcacaacccg tgcgctgaag aggggttcga gttctggagc
 360
 ctggatgtga atggaggcga tgagtgggaag gtggaggatc tctctcgaga ccagaggaag
 420
 gaattcccca atgaccaggt caagaaatac ttcgttactt catattacac ctgcctcaag
 480
 tcccaggtgg tggacctcaa ggccgaaggg tattgggagg agctactaga cacattccgg
 540
 ccggacatcg tggttaagga ctggtttgct gccagagccg actgtggctg cacctaccaa
 600
 ctcaaagtgc agctcctgtc ggctgactac ttcgtgttgg cctccttcga gccagaccgg
 660
 gcgaccatcc agcagaagag cgatgccaaag tggagggagg tctccacac attctccaac
 720
 taccgccccg gcgtccgcta catctggttt cagcacggcg gcgtggacac tcattactgg
 780
 gccggctggg acggccccgag ggtcaccaac agcagcatca ccacggggcc cccgctgccc
 840
 tgacaccccc tgagccccc tctgctgaac cctgactggt aaacaactgc tgtcagaaaa
 900
 gggctgggct tgggaagggg aggtggaggc cagggtgtccc cagacctcta acccttgccc
 960
 ctacgagcct cttctttgtg gagcctctca gtgtgggcag cctcgcctg ctggggtcgg
 1020
 gccagctctc cccgaaaggc cttgacctga atgatggccg gggaagcctg cgtgtgcccc
 1080
 tttcagagac ggagcacct
 1099

<210> 5506
 <211> 280
 <212> PRT
 <213> Homo sapiens

<210> 5504
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 5504
 Gln Lys Ala Gly Glu Lys Pro Leu Ala Ala Gly Pro Gly Glu Glu Glu
 1 5 10 15
 Leu Leu Arg Gly Ser Ala Pro His Ala Gln Asp Thr Gln Ser Glu Glu
 20 25 30
 Leu Pro Pro Ser Cys Thr Ile Ser Gly Glu Lys Lys Pro Pro Ala Val
 35 40 45
 Ser Gly Glu Ala Thr Gly Ala Asp Ala Gly Arg Leu Cys Pro Pro Pro
 50 55 60
 Arg Ser Arg Ala Pro His Lys Asp Arg Thr Leu Ala Arg Ser Arg Pro
 65 70 75 80
 Gln Thr Gln Gly Glu Asp Cys Ser Leu Pro Val Gly Glu Val Lys Ile
 85 90 95
 Gly Lys Arg Ser Tyr Ser Pro Ala Pro Gly Lys Gln Lys Lys Pro Asn
 100 105 110
 Ala Met Gly Leu Ala Pro Thr Ser Ser Pro Gly Ala Pro Asn Ser Ala
 115 120 125
 Arg Ala Thr His Asn Pro Val Pro Cys Gly Ser Gly Arg Gly Pro Cys
 130 135 140
 His Leu Ala Asn Leu Leu Ser Thr Leu Ala Gln Ser Asn Gln Asn Arg
 145 150 155 160
 Asp His Lys Gln Gly Pro Pro Glu Val Thr Cys Gln Ile Arg Lys Lys
 165 170 175
 Thr Arg Thr Leu Tyr Arg Ser Asp Gln Leu Glu Glu Leu Glu Lys Ile
 180 185 190
 Phe Gln Glu Asp His Tyr Pro Asp Ser Asp Lys Arg Arg Glu Ile Ala
 195 200 205
 Gln Thr Val Gly Val Thr Pro Gln Arg Ile Met Val Lys Gly Ala Gly
 210 215 220
 Ser Leu Val Ala Gly Trp Ser Gly Gly Gly Pro Thr Ile Glu Thr Leu
 225 230 235 240
 Glu Leu Gln Ser Glu Arg Ser Ala Val Ala Trp Val Trp Phe Gln Asn
 245 250 255
 Arg Arg Ala Lys Trp Arg Lys Met Glu Lys Leu Asn Gly Lys Glu Ser
 260 265 270
 Lys Asp Asn Pro Ala Ala Pro Gly Pro Ala Ser Ser Gln Cys Ser Ser
 275 280 285
 Ala Ala Glu Ile Leu Pro Ala Val Pro Met Glu Pro Lys Pro Asp Pro
 290 295 300
 Phe Pro Gln Glu Ser Pro Leu Asp Thr Phe Pro Glu Pro Pro Met Leu
 305 310 315 320
 Leu Thr Ser Asp Gln Thr Leu Ala Pro Thr Gln Pro Ser Glu Gly Ala
 325 330 335
 Gln Arg Val Val Thr Pro Pro Leu Phe Ser Pro Pro Pro Val Arg Arg
 340 345 350
 Ala Asp Leu Pro Phe Pro Leu Gly Pro Val His Thr Pro Gln Leu Met
 355 360 365
 Pro Leu Leu Met Asp Val Ala Gly Ser Asp Ser Ser His Lys Asp Gly

taacgccgtc tcagaattgc ataaatttgt ctacattttt caaagaagtt gggttatctg
120
atttaatcct cacaatagtc aagctaggaa ggtaagtgtg gaattattac cccatttgat
180
aggtagacaa attaaagctt aagatcaaac cgtttgcaaa gcaggaagca gcacttcctc
240
ttgggtccagt tcttccttct ccctgggtgct aagggtcagt gatgttggt cccacaggc
300
cagaaagctg gagagaagcc cctgggtgca ggaccgggg aggaggaact gtcggggg
360
tcagccctc atgctcagga cactcagagt gaggaactgc caccctcctg caccatctca
420
ggagagaaga agccgccagc agtctctgga gaagccaccg gggctgatgc tgggagactg
480
tgcccgcccc ccgctccag ggctccccac aaagacagaa ctctagcccg ctccaggccc
540
cagactcagg gggaagattg ttccctccca gtgggagagg tgaagatagg aaagaggctc
600
tattctccag ccccgaggaa gcagaaaaag cctaattgcca tgggtctggc cccaacatca
660
tctccgggtg cccctaactc agcccggtgc acacacaacc cagtgcctg tgggtcaggc
720
cgggggccct gccacctggc caatctctc agtacattgg cgcagagcaa ccaaacaga
780
gaccacaagc aggggcccc ggaagtgacc tgccaaatta ggaaaaagac acgaacccta
840
taccgctcag atcagctgga ggagctagag aagatattcc aagaagacca ctatcctgac
900
agtataaac gccagagat tgcccagacg gtgggggtga cccccagcg catcatggta
960
aagggggcgg gctcactggt ggcagggtg agtggcggag ggcccaccat tgaaacactc
1020
gaattgcaga gtgagcgctc agcggtagcc tgggtgtggt tccagaatcg ccgggccaa
1080
tggcgaaaaa tggagaaact gaatgggaaa gaaagcaagg acaatcctgc agccctggc
1140
cctgccagca gtcaatgcag ctctgcagct gagatcctac ctgctgtgcc catggagcca
1200
aagcctgacc ctttccctca ggagtccct ctggatacct ttccagagcc ccccatgctg
1260
ctgacttctg accagacttt ggccccacc caaccagtg aggggtgctca gaggggtgtg
1320
acccccccac tcttcagccc cccacctgtg cgaagggccg atcttcttt ccccttggc
1380
cctgtccaca ccccccaact gatgccactg ctgatggatg ttgctggcag tgacagcagc
1440
cacaaggacg gccctgtgg gtccctggggg acaaggtaag gaacctacgg gggtaggtca
1500
ctctagttat ctgggtgggg gtaggggggt gtagatggag agaagataga cacagagagg
1560
agagggttaa ctgagaggag cacagagtgg tacaggagat ggggatgaaa gggataaggg
1620
gatctgggga atgacctagg ggatcacagc aatagagcag aaacaagggt aagatgcta
1679

<212> DNA

<213> Homo sapiens

<400> 5501

attcggcacg aggtgagtcg gtggcaggaa cgtgggctct agactgtgca ttcaggctct
 60
 cctacttggc agaatgatct tggggaaacg acttcatctg aacttcagat atttcacatg
 120
 tgaagcgggg acaaaacccat gcagctcaga ggtccctgtg ggggctgggg gagctgccct
 180
 gcaggtcttg gcacatgcac agcaggctcc ccatagcttt gtcaccacaa agggcactgt
 240
 tctattcaca gcacctcctg cttctgcctg gcaactgtgt ctccctgtgc tatatttaat
 300
 tccaccagca aagctggcga ggcaggggccc agccctgaag gagatctcct tgctgaccc
 360
 ctggacctgg aaatggaggc ttcattgtgcc cgccttggcg gcttaagcct gctgctttgg
 420
 cagtgccatg ggtgagccga gcagctgtga ggtgggtggg gcagggtgtg agcccacgcc
 480
 ggggtgctatt ccaggctcta ggggctgggtg ctcatcccca ccccagcga cttccgtcct
 540
 acctggcatg ctgcagccct ctgccggc
 568

<210> 5502

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5502

Met	Ile	Leu	Gly	Lys	Arg	Leu	His	Leu	Asn	Phe	Arg	Tyr	Phe	Thr	Cys
1				5					10					15	
Glu	Ala	Gly	Thr	Lys	Pro	Cys	Ser	Ser	Glu	Val	Pro	Val	Gly	Ala	Gly
			20					25					30		
Gly	Ala	Ala	Leu	Gln	Val	Leu	Ala	His	Ala	Gln	Gln	Ala	Pro	His	Ser
			35				40					45			
Phe	Val	Thr	Thr	Lys	Gly	Thr	Val	Leu	Phe	Thr	Ala	Pro	Pro	Ala	Ser
	50					55				60					
Ala	Trp	Gln	Leu	Cys	Leu	Pro	Val	Leu	Tyr	Leu	Ile	Pro	Pro	Ala	Lys
65					70				75					80	
Leu	Ala	Arg	Gln	Gly	Pro	Ala	Leu	Lys	Glu	Ile	Ser	Leu	Pro	Asp	Pro
			85					90					95		
Trp	Thr	Trp	Lys	Trp	Arg	Leu	His	Val	Pro	Ala	Leu	Ala	Ala		
			100				105						110		

<210> 5503

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 5503

tgtctgggaa aagggaaactc acaaggggtg agtaccacca aattaggaga taccatgagc
 60

20	25	30
Leu Arg Phe Asn Glu Thr Thr	Leu Cys Lys Pro Leu Val Pro Arg Glu	
35	40	45
His Gln Phe Tyr Glu Thr	Leu Pro Ala Glu Met Arg Lys Phe Thr Pro	
50	55	60
Gln Tyr Lys Gly Val Val	Ser Val Arg Phe Glu Glu Asp Glu Asp Arg	
65	70	75
Asn Leu Cys Leu Ile Ala Tyr	Pro Leu Lys Gly Asp His Gly Ile Val	
85	90	95
Asp Ile Ala His Asn Ser Asp	Cys Glu Pro Lys Ser Lys Leu Leu Arg	
100	105	110
Trp Thr Thr Asn Lys Lys His	His Val Leu Glu Thr Glu Lys Thr Pro	
115	120	125
Lys Asp Trp Val Arg Gln His	Arg Lys Glu Glu Lys Met Lys Ser His	
130	135	140
Lys Leu Glu Glu Glu Phe Glu	Trp Leu Lys Lys Ser Glu Val Leu Tyr	
145	150	155
Tyr Thr Val Glu Lys Lys Gly	Asn Ile Ser Ser Gln Leu Lys His Tyr	
165	170	175
Asn Pro Trp Ser Met Lys Cys	His Gln Gln Leu Gln Arg Met Lys	
180	185	190
Glu Asn Ala Lys His Arg Asn	Gln Tyr Lys Phe Ile Leu Leu Glu Asn	
195	200	205
Leu Thr Ser Arg Tyr Glu Val	Pro Cys Val Leu Asp Leu Lys Met Gly	
210	215	220
Thr Arg Gln His Gly Asp Asp	Ala Ser Glu Glu Lys Ala Ala Asn Gln	
225	230	235
Ile Arg Lys Cys Gln Gln Ser	Thr Ser Ala Val Ile Gly Val Xaa Val	
245	250	255
Cys Gly Met Gln Val Tyr Gln	Ala Gly Ser Gly Gln Leu Met Phe Met	
260	265	270
Asn Lys Tyr His Gly Arg Lys	Leu Ser Val Gln Gly Phe Lys Glu Ala	
275	280	285
Leu Phe Gln Phe Phe His Asn	Gly Arg Tyr Leu Arg Arg Glu Leu Leu	
290	295	300
Gly Pro Val Leu Lys Lys Leu	Thr Glu Leu Lys Ala Val Leu Glu Arg	
305	310	315
Gln Glu Ser Tyr Arg Phe Tyr	Ser Ser Ser Leu Leu Val Ile Tyr Asp	
325	330	335
Gly Lys Glu Arg Pro Glu Val	Val Leu Asp Ser Asp Ala Glu Asp Leu	
340	345	350
Glu Asp Leu Ser Glu Glu Ser	Ala Asp Glu Ser Ala Gly Ala Tyr Ala	
355	360	365
Tyr Lys Pro Ile Gly Ala Ser	Ser Val Asp Val Arg Met Ile Asp Phe	
370	375	380
Ala His Thr Thr Cys Arg Leu	Tyr Gly Glu Asp Thr Val Val His Glu	
385	390	395
Gly Gln Asp Ala Gly Tyr Ile	Phe Gly Leu Gln Ser Leu Ile Asp Ile	
405	410	415
Val Thr Glu Ile Ser Glu Glu	Ser Gly Glu	
420	425	

<210> 5501

<211> 568

ggggaccatg gaattgtgga cattgcacat aattcagact gtgaaccaa aagtaagctc
 660
 ctaagggtgga caacaaacaa aaaacatcat gtcttagaaa cagaaaagac ccctaaggac
 720
 tgggtgctc agcacgtaa agaggagaaa atgaagagcc ataagttaga agaagaattt
 780
 gagtggctaa agaaatctga agtctgtac tacactgtag agaagaaggg gaatataagt
 840
 tcccagctta aacactataa cccttgagc atgaaatgac accagcaaca gttacagaga
 900
 atgaaggaga atgcaaagca tcggaaccag tacaaattta tcttactgga aaacctgact
 960
 tcccgtatg aggtgccttg tgccttgac ctcaagatgg gcacacgaca acatggtgat
 1020
 gatgcttcag aggagaaggc agccaaccag atccgaaaat gtcagcagag cacatctgca
 1080
 gtcattggtg tgnctgtgtg tggcatgcag gtgtaccaag caggcagtgg gcagctcatg
 1140
 ttcattgaaca agtaccatgg acggaagcta tcggtgcagg gcttcaagga ggcacttttc
 1200
 cagttcttcc acaatgggag gtacctgcgc cgtgaactcc tgggccctgt gctcaagaag
 1260
 ctgactgagc tcaaggcagt gttggagcga caggagtcct accgcttcta ctcaagctcc
 1320
 ctgctggtca tttatgatgg caaggagcgg cccgaagtgg tcttgactc agatgctgag
 1380
 gatttgagg acctgtcaga ggaatcagct gatgagctg ctggtgccta tgcctacaaa
 1440
 cccatcgagg ccagctctgt agatgtgcgc atgatcgact ttgcacacac cacctgcagg
 1500
 ctgtatggcg aggacaccgt ggtgcatgag ggccaggatg ctggctatat cticgggctc
 1560
 cagagcctga tagacattgt cacagagata agtgaggaga gtggggagtg agcttgctag
 1620
 ctgctccagt acttgagagc gactctgtgt cccaggcaca gctgtgctgc gtcaggagg
 1680
 aagccagtat ggccagggtg tggctcctgc agcctggagc tgatgtgcag tggcctctgt
 1740
 gagccccagc ctgagccagt cccagctgtg cttggagtct ttatttattt taactatttc
 1800
 ttcaacattc cacatttgat gatgatacct ctttcttccc tgagtgtata tgttctaata
 1860
 caaatctttt tgtttattgt aaaaaaaaaa aaaaaaaaaa aaagaaaaac tcgaaaag
 1918

<210> 5500

<211> 426

<212> PRT

<213> Homo sapiens

<400> 5500

Met Ser Pro Ala Phe Arg Ala Met Asp Val Glu Pro Arg Ala Lys Gly
 1 5 10 15
 Val Leu Leu Glu Pro Phe Val His Gln Val Gly Gly His Ser Cys Val

<210> 5498
 <211> 150
 <212> PRT
 <213> Homo sapiens

<400> 5498
 Met Gly Gln Gly Ser Glu Ala Ala His Thr Pro Leu Lys Asn Glu Phe
 1 5 10 15
 His Pro Pro Ala Phe Ala Pro Arg Thr Leu Arg Met Ala Gln Leu Val
 20 25 30
 Ala Gln Leu Trp Trp Ser Ser Pro Phe Ile His Ser Pro Gly Glu Thr
 35 40 45
 Asn Ile Pro His Thr Leu Thr Glu Pro His Ser Val Pro Gly Trp Cys
 50 55 60
 Trp Asp Thr Leu Arg Arg His Gly Ala Gly Gln Gly His Pro Gly Met
 65 70 75 80
 Ala Arg Ser Gly Thr Gly Glu Gly Gln Arg Glu Gly Asp Ile Glu Arg
 85 90 95
 Glu Glu Asp Glu Glu Glu Gly Asn Arg Ser Arg Lys Ser Arg Asp Ser
 100 105 110
 Arg Ser Gln Val Lys Gly Leu Pro Leu His Ser Arg Glu Gln Arg Asp
 115 120 125
 Pro Ser Ala Gly Ala Ser Glu Lys Ser Arg Asn Pro Ser Arg Met Gly
 130 135 140
 Thr Trp Gly Val Asn Phe
 145 150

<210> 5499
 <211> 1918
 <212> DNA
 <213> Homo sapiens

<400> 5499
 ngctagccct gtatctgtct gagcagtggg atgtgccagg aaagaaggag caaccactga
 60
 ctgatgaacc ttgcccagtc tcccttccaa gagggatgcc agagccttct gtctttgggc
 120
 tgccctctgcc cttegtagat tctctgctgg gcctttggaa ctaacacagc aacttccagg
 180
 gtctcatgtt gaagacttta tggagcatcc tggccagaac aagccaagga gccaagacga
 240
 gagggacaca cggacaaaaca acagacagaa gacgtactgg ccgctggact ccgctgcctc
 300
 ccccatctcc ccgccatctg cgcccggagg atgagcccag ccttcagggc catggatgtg
 360
 gagccccgcg ccaaaggcgt ccttctggag ccctttgtcc accaggtcgg ggggactca
 420
 tgcgtgctcc gcttcaatga gacaacctg tgcaagcccc tggccccaaag ggaacatcag
 480
 ttctacgaga ccttcctgc tgagatgcgc aaattcactc ccagtagaaa aggtgtggta
 540
 tctgtgcgct ttgaagaaga tgaagacagg aacttgtgtc taatagcata tccattgaaa
 600

	260		265		270										
Phe	His	Met	Ala	Cys	Pro	Thr	Phe	Arg	Val	Ser	Ile	Ala	Arg	Leu	Glu
	275		280		285										
Met	Gly	Pro	Asp	Glu	Tyr	Glu	Glu	Met	Glu	Glu	Glu	Glu	Glu	Glu	Glu
	290		295		300										
Glu	Glu	Glu	Asp	Glu	Asp	Asp	Asp	Ser	Ala	Asp	Met	Asp	Glu	Ser	Asp
305			310		315									320	
Glu	Asp	Asp	Glu	Glu	Glu	Arg	Arg	Arg	Arg	Val	Phe	Asp	Val	Pro	Ile
	325		330		335										
Arg	Arg	Arg	Arg	Cys	Ser	Arg	Leu	Phe							
	340		345												

<210> 5497

<211> 1056

<212> DNA

<213> Homo sapiens

<400> 5497

cacgaggaag aatgtggaag gatctcccat tggccggttg gggcaaaagc ctgaggcaat
60

ctttcatccc cttttgccaa ggcgagactt tcccagtgac ggtgatgtag ttggccactc
120

tgactatggg tggactcggg tgtagacctc tgaagctgag atcacacgaa aacctggcct
180

ccccgccatg tagctgttgg agagtagaaa aatagagcac gcctgatgtt tctaaatgag
240

aagactttca atagtaatga agaattccatg gcaactctct caccctcaaa cacatggcag
300

tcattcacat acaggcccca aagtcactgt tagtgctgca gtggctcttg tggacattgg
360

aaagcccga gagggcgtgg aagaaatcag ctggcccccg gcagggtctc tggggttttg
420

tgcccaaggc tcctggagcc ctaaaaactt tcaaaagtta actccccacg tccccatcct
480

gcttgggttt ctggactttt ctgaggcacc ggcagagggg tctcgttgct cccttgagtg
540

taggggcagc cctttaacct ggctccttga gtccctgctt tttctgcttc tgttgccctc
600

ttcctcgtct tctctctct caatatctcc ctctctttgt cctccccag ttcctgacct
660

ggccatcccg gggtgccctt gaccagcccc gtgtctctc aggggtgtccc agcaccagcc
720

tggcacagag tggggctcag ttagagtatg tgggatgttg gtttcgccag gtgagtgaat
780

gaaaggactc gaccaccaca gctgagccac tagctgggcc atgcgaagag ttctaggtgc
840

aaaggctgga ggggtgaatt catttttgag aggtgtgtga gcagcttccg acccctgcc
900

catttgaacg ggggccttgc tggtcgctc cctgcattca cccgcgcggc catcccgctc
960

tccaacagtt gatcctaact gagcaccccc acggccctgg tctggcctgg gcaccggcga
1020

ccgtagccca tcccttgatg gcctctgtgt cccag

1056

gaatttaatt tcaggctctc aacatgatga ccttggattt aatttaaagt cttcaacact
 2100
 atgcgcttta tcatattatt cacagatgca tttttgaaat gtagtatgta aaagtatgta
 2160
 acgtgctgtt tattaacaaa agattgttca caacatctca ttagatttaa atttgtaa
 2220
 actgcttctg ttttgcttct cctttataca cttgactgtc tttgtgataa gtgacatgaa
 2280
 ttttatgta ggattaagta tgcttctctg aaacttggat ttttttgta attatataat
 2340
 tgagagttaa gaatgaaatc cttcaagtgt taaaaactca cattttaaaa gcaaattttg
 2400
 gttccaaaaa aaaa
 2414

<210> 5496

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5496

Met	Leu	Trp	Lys	Arg	Arg	Leu	Gly	Cys	Lys	Phe	Pro	Gly	Arg	Leu	Ser
1			5						10					15	
Met	Phe	Ile	Pro	Asn	Ser	Gln	Trp	Thr	Glu	Val	Ser	Trp	Phe	Leu	Gly
			20					25					30		
Leu	Leu	Gly	Ser	Met	Ala	Leu	Ser	Asn	His	Tyr	Arg	Ser	Glu	Asp	Leu
		35					40					45			
Leu	Asp	Val	Asp	Thr	Ala	Ala	Gly	Gly	Phe	Gln	Gln	Arg	Gln	Gly	Leu
	50					55					60				
Lys	Tyr	Cys	Leu	Pro	Leu	Thr	Phe	Cys	Ile	His	Thr	Gly	Leu	Ser	Gln
65					70					75				80	
Tyr	Ile	Ala	Val	Glu	Ala	Ala	Glu	Gly	Arg	Asn	Lys	Asn	Glu	Val	Phe
				85					90					95	
Tyr	Gln	Cys	Pro	Asp	Gln	Met	Ala	Arg	Asn	Pro	Ala	Ala	Ile	Asp	Met
			100					105					110		
Phe	Ile	Ile	Gly	Ala	Thr	Phe	Thr	Asp	Trp	Phe	Thr	Ser	Tyr	Val	Lys
		115					120					125			
Asn	Val	Val	Ser	Gly	Gly	Phe	Pro	Ile	Ile	Arg	Asp	Gln	Ile	Phe	Arg
	130					135					140				
Tyr	Val	His	Asp	Pro	Glu	Cys	Val	Ala	Thr	Thr	Gly	Asp	Ile	Thr	Val
145					150					155				160	
Ser	Val	Ser	Thr	Ser	Phe	Leu	Pro	Glu	Leu	Ser	Ser	Val	His	Pro	Pro
				165					170					175	
His	Tyr	Phe	Phe	Thr	Tyr	Arg	Ile	Arg	Ile	Glu	Met	Ser	Lys	Asp	Ala
			180					185						190	
Leu	Pro	Glu	Lys	Ala	Cys	Gln	Leu	Asp	Ser	Arg	Tyr	Trp	Arg	Ile	Thr
			195				200						205		
Asn	Ala	Lys	Gly	Asp	Val	Glu	Glu	Val	Gln	Gly	Pro	Gly	Val	Val	Gly
	210						215					220			
Glu	Phe	Pro	Ile	Ile	Ser	Pro	Gly	Arg	Val	Tyr	Glu	Tyr	Thr	Ser	Cys
225					230					235				240	
Thr	Thr	Phe	Ser	Thr	Thr	Ser	Gly	Tyr	Met	Glu	Gly	Tyr	Tyr	Thr	Phe
				245					250					255	
His	Phe	Leu	Tyr	Phe	Lys	Asp	Lys	Ile	Phe	Asn	Val	Ala	Ile	Pro	Arg

agattgggct gcaagtttcc tggacgatta tcgatgttca taccgaattc acaatggaca
480
gaagttagtt gggttcctggg gttattggga agcatggcac tgtctaataca ctatcgttct
540
gaagatttgt tagacgtcga tacagctgcc ggaggattcc agcagagaca gggactgaaa
600
tactgtctcc ctttaacttt ttgcatacat actggtttga gtcagtacat agcagtggaa
660
gctgcagagg gccgaaacaa aaatgaagtt ttctaccaat gtccagacca aatggctcga
720
aatccagctg ctattgacat gtttattata ggtgctactt ttactgactg gtttacctct
780
tatgtcaaaa atggtgtatc aggtggcttc cccatcatca gagaccaa at ttcagatat
840
gttcacgac cagaatgtgt agcaacaact ggggatatta ctgtgtcagt ttccacatcg
900
tttctgccag aacttagctc tgtacatcca cccactatt tcttcacata ccgaatcagg
960
attgaaatgt caaaagatgc acttcctgag aaggcctgtc agttggacag tcgctattgg
1020
agaataacaa atgctaaggg tgacgtggaa gaagttcaag gacctggagt agttggtgaa
1080
tttccaatca tcagcccagg tcgggtatat gaatacacia gctgtaccac attctctaca
1140
acatcaggat acatggaagg gtattatacc ttccattttc tttactttta agacaagatc
1200
tttaatgttg ccattccccg attccatatt gcatgtccaa cattcagggg gtctatagcc
1260
cgattggaaa tgggtcctga tgaatatgaa gagatggaag aagaggagga ggaggaagag
1320
gaggaagacg aggatgatga ttcagcagat atggatgaat cagatgaaga tgatgaagag
1380
gagagacgga ggagagtctt tgatgttccc attcgcagac gccgctgctc acgccttttt
1440
tagcaagcct tctgctgatg gaagcactag gatgattcta ggctgttaaa tagattttct
1500
aataatgtaa ataactaaat tgttctctgc atatagcagg aaaactagca tgaaatattg
1560
tttcaggccc tgggttctat gtgacactac attaggaatt ggaattgtttg gggttgcctt
1620
gtgtttttga ggtagaggaa gaaatgggaa tctttttttt ctcttcagg agtcagtggg
1680
agaatagtcc tctagctaag gaacggacat accttggtt taaaatattt tatacttaca
1740
aaaatctaga aatggagagg gaactgtttt gaataaggat ttaaaatacc tgcacaagga
1800
tagagagaaa ctatgtgact cattctgtga aaagacttct tgcagttgtg agttatttag
1860
aaatgatcaa aatttgtaat taggctaata catttagtga ttcttaatat tttgtactca
1920
cagagaacta attgactaaa caactgaac gctagtgggt tgtccttaga caatctgtct
1980
ttgaatttaa agtctttatc gctaagacct tgactttaaa tttttcatca ctacaacctt
2040

1010 1015 1020
 Ile Leu Leu Gly His Gly Thr Arg Val Gly Ala Thr Tyr Phe Met Thr
 1025 1030 1035 1040
 Tyr His Thr Val Leu Gln Thr Ser Ala Asp Phe Ile Asp Ala Leu Lys
 1045 1050 1055
 Lys Ala Arg Leu Ile Ala Ser Asn Val Thr Glu Thr Met Gly Ile Asn
 1060 1065 1070
 Gly Ser Ala Tyr Arg Val Phe Pro Tyr Ser Val Phe Tyr Val Phe Tyr
 1075 1080 1085
 Glu Gln Tyr Leu Thr Ile Ile Asp Asp Thr Ile Phe Asn Leu Gly Val
 1090 1095 1100
 Ser Leu Gly Ala Ile Phe Leu Val Thr Met Val Leu Leu Gly Cys Glu
 1105 1110 1115 1120
 Leu Trp Ser Ala Val Ile Met Cys Ala Thr Ile Ala Met Val Leu Val
 1125 1130 1135
 Asn Met Phe Gly Val Met Trp Leu Trp Gly Ile Ser Leu Asn Ala Val
 1140 1145 1150
 Ser Leu Val Asn Leu Val Met Ser Cys Gly Ile Ser Val Glu Phe Cys
 1155 1160 1165
 Ser His Ile Thr Arg Ala Phe Thr Val Ser Met Lys Gly Ser Arg Val
 1170 1175 1180
 Glu Arg Ala Glu Glu Ala Leu Ala His Met Gly Ser Ser Val Phe Ser
 1185 1190 1195 1200
 Gly Ile Thr Leu Thr Lys Phe Gly Gly Ile Val Val Leu Ala Phe Ala
 1205 1210 1215
 Lys Ser Gln Ile Phe Gln Ile Phe Tyr Phe Arg Met Tyr Leu Ala Met
 1220 1225 1230
 Val Leu Leu Gly Ala Thr His Gly Leu Ile Phe Leu Pro Val Leu Leu
 1235 1240 1245
 Ser Tyr Ile Gly Pro Ser Val Asn Lys Ala Lys Ser Cys Ala Thr Glu
 1250 1255 1260
 Glu Arg Tyr Lys Gly Thr Glu Arg Glu Arg Leu Leu Asn Phe
 1265 1270 1275

<210> 5495

<211> 2414

<212> DNA

<213> Homo sapiens

<400> 5495

agacctgcac cgggccaggc aagatggcgg ccatggagac cgagacggcg ccgctgaccc
 60
 tagagtcgct gccaccgat cccctgctcc tcattttatc ctttttggac tatcgggac
 120
 taatcaactg ttgttatgtc agtcgaagac ttagccagct atcaagtcac gatccgctgt
 180
 ggagaagaca ttgcaaaaaa tactggctga tatctgagga agagaaaaca cagaagaatc
 240
 agtggtggaa atctctcttc atagatactt actctgatgt aggaagatac attgaccatt
 300
 atgctgctat taaaaaggcc tgggatgac tcaagaaata tttggagccc aggtgtcctc
 360
 ggatgggtttt atctctgaaa gaggggtgctc gagaggaaga cctcgatgct gtggaagcgc
 420

580										585										590																											
Asn	Tyr	Lys	Asn	Pro	Asn	Leu	Thr	Ile	Ser	Phe	Thr	Ala	Glu	Arg	Ser	Asn	Tyr	Lys	Asn	Pro	Asn	Leu	Thr	Ile	Ser	Phe	Thr	Ala	Glu	Arg	Ser	Asn	Tyr	Lys	Asn	Pro	Asn	Leu	Thr	Ile	Ser	Phe	Thr	Ala	Glu	Arg	Ser
595										600										605																											
Ile	Glu	Asp	Glu	Leu	Asn	Arg	Glu	Ser	Asp	Ser	Asp	Val	Phe	Thr	Val	Ile	Glu	Asp	Glu	Leu	Asn	Arg	Glu	Ser	Asp	Ser	Asp	Val	Phe	Thr	Val	Ile	Glu	Asp	Glu	Leu	Asn	Arg	Glu	Ser	Asp	Ser	Asp	Val	Phe	Thr	Val
610										615										620																											
Val	Ile	Ser	Tyr	Ala	Ile	Met	Phe	Leu	Tyr	Ile	Ser	Leu	Ala	Leu	Gly	Val	Ile	Ser	Tyr	Ala	Ile	Met	Phe	Leu	Tyr	Ile	Ser	Leu	Ala	Leu	Gly	Val	Ile	Ser	Tyr	Ala	Ile	Met	Phe	Leu	Tyr	Ile	Ser	Leu	Ala	Leu	Gly
625										630										635																											
His	Ile	Lys	Ser	Cys	Arg	Arg	Leu	Leu	Val	Asp	Ser	Lys	Val	Ser	Leu	His	Ile	Lys	Ser	Cys	Arg	Arg	Leu	Leu	Val	Asp	Ser	Lys	Val	Ser	Leu	His	Ile	Lys	Ser	Cys	Arg	Arg	Leu	Leu	Val	Asp	Ser	Lys	Val	Ser	Leu
645										650										655																											
Gly	Ile	Ala	Gly	Ile	Leu	Ile	Val	Leu	Ser	Ser	Val	Ala	Cys	Ser	Leu	Gly	Ile	Ala	Gly	Ile	Leu	Ile	Val	Leu	Ser	Ser	Val	Ala	Cys	Ser	Leu	Gly	Ile	Ala	Gly	Ile	Leu	Ile	Val	Leu	Ser	Ser	Val	Ala	Cys	Ser	Leu
660										665										670																											
Gly	Val	Phe	Ser	Tyr	Ile	Gly	Leu	Pro	Leu	Thr	Leu	Ile	Val	Ile	Glu	Gly	Val	Phe	Ser	Tyr	Ile	Gly	Leu	Pro	Leu	Thr	Leu	Ile	Val	Ile	Glu	Gly	Val	Phe	Ser	Tyr	Ile	Gly	Leu	Pro	Leu	Thr	Leu	Ile	Val	Ile	Glu
675										680										685																											
Val	Ile	Pro	Phe	Leu	Val	Leu	Ala	Val	Gly	Val	Asp	Asn	Ile	Phe	Ile	Val	Ile	Pro	Phe	Leu	Val	Leu	Ala	Val	Gly	Val	Asp	Asn	Ile	Phe	Ile	Val	Ile	Pro	Phe	Leu	Val	Leu	Ala	Val	Gly	Val	Asp	Asn	Ile	Phe	Ile
690										695										700																											
Leu	Val	Gln	Ala	Tyr	Gln	Arg	Asp	Glu	Arg	Leu	Gln	Gly	Glu	Thr	Leu	Leu	Val	Gln	Ala	Tyr	Gln	Arg	Asp	Glu	Arg	Leu	Gln	Gly	Glu	Thr	Leu	Leu	Val	Gln	Ala	Tyr	Gln	Arg	Asp	Glu	Arg	Leu	Gln	Gly	Glu	Thr	Leu
705										710										715																											
Asp	Gln	Gln	Leu	Gly	Arg	Val	Leu	Gly	Glu	Val	Ala	Pro	Ser	Met	Phe	Asp	Gln	Gln	Leu	Gly	Arg	Val	Leu	Gly	Glu	Val	Ala	Pro	Ser	Met	Phe	Asp	Gln	Gln	Leu	Gly	Arg	Val	Leu	Gly	Glu	Val	Ala	Pro	Ser	Met	Phe
725										730										735																											
Leu	Ser	Ser	Phe	Ser	Glu	Thr	Val	Ala	Phe	Phe	Leu	Gly	Ala	Leu	Ser	Leu	Ser	Ser	Phe	Ser	Glu	Thr	Val	Ala	Phe	Phe	Leu	Gly	Ala	Leu	Ser	Leu	Ser	Ser	Phe	Ser	Glu	Thr	Val	Ala	Phe	Phe	Leu	Gly	Ala	Leu	Ser
740										745										750																											
Val	Met	Pro	Ala	Val	His	Thr	Phe	Ser	Leu	Phe	Ala	Gly	Leu	Ala	Val	Val	Met	Pro	Ala	Val	His	Thr	Phe	Ser	Leu	Phe	Ala	Gly	Leu	Ala	Val	Val	Met	Pro	Ala	Val	His	Thr	Phe	Ser	Leu	Phe	Ala	Gly	Leu	Ala	Val
755										760										765																											
Phe	Ile	Asp	Phe	Leu	Leu	Gln	Ile	Thr	Cys	Phe	Val	Ser	Leu	Leu	Gly	Phe	Ile	Asp	Phe	Leu	Leu	Gln	Ile	Thr	Cys	Phe	Val	Ser	Leu	Leu	Gly	Phe	Ile	Asp	Phe	Leu	Leu	Gln	Ile	Thr	Cys	Phe	Val	Ser	Leu	Leu	Gly
770										775										780																											
Leu	Asp	Ile	Lys	Arg	Gln	Gly	Lys	Asn	Arg	Leu	Asp	Ile	Phe	Cys	Cys	Leu	Asp	Ile	Lys	Arg	Gln	Gly	Lys	Asn	Arg	Leu	Asp	Ile	Phe	Cys	Cys	Leu	Asp	Ile	Lys	Arg	Gln	Gly	Lys	Asn	Arg	Leu	Asp	Ile	Phe	Cys	Cys
785										790										795																											
Val	Arg	Gly	Ala	Glu	Asp	Gly	Thr	Ser	Val	Gln	Ala	Ser	Glu	Ser	Cys	Val	Arg	Gly	Ala	Glu	Asp	Gly	Thr	Ser	Val	Gln	Ala	Ser	Glu	Ser	Cys	Val	Arg	Gly	Ala	Glu	Asp	Gly	Thr	Ser	Val	Gln	Ala	Ser	Glu	Ser	Cys
805										810										815																											
Leu	Phe	Arg	Phe	Phe	Lys	Asn	Ser	Tyr	Ser	Pro	Leu	Leu	Leu	Lys	Asp	Leu	Phe	Arg	Phe	Phe	Lys	Asn	Ser	Tyr	Ser	Pro	Leu	Leu	Leu	Lys	Asp	Leu	Phe	Arg	Phe	Phe	Lys	Asn	Ser	Tyr	Ser	Pro	Leu	Leu	Leu	Lys	Asp
820										825										830																											
Trp	Met	Arg	Pro	Ile	Val	Ile	Ala	Ile	Phe	Val	Gly	Val	Leu	Ser	Phe	Trp	Met	Arg	Pro	Ile	Val	Ile	Ala	Ile	Phe	Val	Gly	Val	Leu	Ser	Phe	Trp	Met	Arg	Pro	Ile	Val	Ile	Ala	Ile	Phe	Val	Gly	Val	Leu	Ser	Phe
835										840										845																											
Ser	Ile	Ala	Val	Leu	Asn	Lys	Val	Asp	Ile	Gly	Leu	Asp	Gln	Ser	Leu	Ser	Ile	Ala	Val	Leu	Asn	Lys	Val	Asp	Ile	Gly	Leu	Asp	Gln	Ser	Leu	Ser	Ile	Ala	Val	Leu	Asn	Lys	Val	Asp	Ile	Gly	Leu	Asp	Gln	Ser	Leu
850										855										860																											
Ser	Met	Pro	Asp	Asp	Ser	Tyr	Met	Val	Asp	Tyr	Phe	Lys	Ser	Ile	Ser	Ser	Met	Pro	Asp	Asp	Ser	Tyr	Met	Val	Asp	Tyr	Phe	Lys	Ser	Ile	Ser	Ser	Met	Pro	Asp	Asp	Ser	Tyr	Met	Val	Asp	Tyr	Phe	Lys	Ser	Ile	Ser
865										870										875																											
Gln	Tyr	Leu	His	Ala	Gly	Pro	Pro	Val	Tyr	Phe	Val	Leu	Glu	Glu	Gly	Gln	Tyr	Leu	His	Ala	Gly	Pro	Pro	Val	Tyr	Phe	Val	Leu	Glu	Glu	Gly	Gln	Tyr	Leu	His	Ala	Gly	Pro	Pro	Val	Tyr	Phe	Val	Leu	Glu	Glu	Gly
885										890										895																											
His	Asp	Tyr	Thr	Ser	Ser	Lys	Gly	Gln	Asn	Met	Val	Cys	Gly	Gly	Met	His	Asp	Tyr	Thr	Ser	Ser	Lys	Gly	Gln	Asn	Met	Val	Cys	Gly	Gly	Met	His	Asp	Tyr	Thr	Ser	Ser	Lys	Gly	Gln	Asn	Met	Val	Cys	Gly	Gly	Met
900										905										910																											
Gly	Cys	Asn	Asn	Asp	Ser	Leu	Val	Gln	Gln	Ile	Phe	Asn	Ala	Ala	Gln	Gly	Cys	Asn	Asn	Asp	Ser	Leu	Val	Gln	Gln	Ile	Phe	Asn	Ala	Ala	Gln	Gly	Cys	Asn	Asn	Asp	Ser	Leu	Val	Gln	Gln	Ile	Phe	Asn	Ala	Ala	Gln
915										920										925																											
Leu	Asp	Asn	Tyr	Thr	Arg	Ile	Gly	Phe	Ala	Pro	Ser	Ser	Trp	Ile	Asp	Leu	Asp	Asn	Tyr	Thr	Arg	Ile	Gly	Phe	Ala	Pro	Ser	Ser	Trp	Ile	Asp	Leu	Asp	Asn	Tyr	Thr	Arg	Ile	Gly	Phe	Ala	Pro	Ser	Ser	Trp	Ile	Asp
930										935										940																											
Asp	Tyr	Phe	Asp	Trp	Val	Lys	Pro	Gln	Ser	Ser	Cys	Cys	Arg	Val	Asp	Asp	Tyr	Phe	Asp	Trp	Val	Lys	Pro	Gln	Ser	Ser	Cys	Cys	Arg	Val	Asp	Asp	Tyr	Phe	Asp	Trp	Val	Lys	Pro	Gln	Ser	Ser	Cys	Cys	Arg	Val	Asp
945										950										955																											
Asn	Ile	Thr	Asp	Gln	Phe	Cys	Asn	Ala	Ser	Val	Val	Asp	Pro	Ala	Cys	Asn	Ile	Thr	Asp	Gln	Phe	Cys	Asn	Ala	Ser	Val	Val	Asp	Pro	Ala	Cys	Asn	Ile	Thr	Asp	Gln	Phe	Cys	Asn	Ala	Ser	Val	Val	Asp	Pro	Ala	Cys
965										970										975																											
Val	Arg	Cys	Arg	Pro	Leu	Thr	Pro	Gly	Gly	Lys	Gln	Arg	Pro	Gln	Gly	Val	Arg	Cys	Arg	Pro	Leu	Thr	Pro	Gly	Gly	Lys	Gln	Arg	Pro	Gln	Gly	Val	Arg	Cys	Arg	Pro	Leu	Thr	Pro	Gly	Gly	Lys	Gln	Arg	Pro	Gln	Gly
980										985										990																											
Gly	Asp	Phe	Met	Arg	Phe	Leu	Pro	Met	Phe	Leu	Ser	Asp	Asn	Pro	Asn	Gly	Asp	Phe	Met	Arg	Phe	Leu	Pro	Met	Phe	Leu	Ser	Asp	Asn	Pro	Asn	Gly	Asp	Phe	Met	Arg	Phe	Leu	Pro	Met	Phe	Leu	Ser	Asp	Asn	Pro	Asn
995										1000										1005																											
Pro	Lys	Cys	Gly	Lys	Gly	Gly	His	Ala	Ala	Tyr	Ser	Ser	Ala	Val	Asn	Pro	Lys	Cys	Gly	Lys	Gly	Gly	His	Ala	Ala	Tyr	Ser	Ser	Ala	Val	Asn	Pro	Lys	Cys	Gly	Lys	Gly	Gly	His	Ala	Ala	Tyr	Ser	Ser	Ala	Val	Asn

145				150				155				160
Arg	Asp	Val	Glu	Ala	Pro	Ser	Ser	Asn	Asp	Lys	Ala	Leu
				165				170				175
Cys	Gly	Lys	Asp	Ala	Asp	Ala	Cys	Asn	Ala	Thr	Asn	Trp
			180					185				190
Met	Phe	Asn	Lys	Asp	Asn	Gly	Gln	Ala	Pro	Phe	Thr	Ile
		195				200					205	
Phe	Ser	Asp	Phe	Pro	Val	His	Gly	Met	Glu	Pro	Met	Asn
	210					215				220		
Lys	Gly	Cys	Asp	Glu	Ser	Val	Asp	Glu	Val	Thr	Ala	Pro
225					230					235		240
Gln	Asp	Cys	Ser	Ile	Val	Cys	Gly	Pro	Lys	Pro	Gln	Pro
			245					250				255
Pro	Ala	Pro	Trp	Thr	Ile	Leu	Gly	Leu	Asp	Ala	Met	Tyr
			260					265				270
Trp	Ile	Thr	Tyr	Met	Ala	Phe	Leu	Leu	Val	Phe	Phe	Gly
	275					280					285	
Ala	Val	Trp	Cys	Tyr	Arg	Lys	Arg	Tyr	Phe	Val	Ser	Glu
	290				295					300		
Ile	Asp	Ser	Asn	Ile	Ala	Phe	Ser	Val	Asn	Ala	Ser	Asp
305				310					315			320
Ala	Ser	Cys	Cys	Asp	Pro	Val	Ser	Ala	Ala	Phe	Glu	Gly
			325					330				335
Arg	Leu	Phe	Thr	Arg	Trp	Gly	Ser	Phe	Cys	Val	Arg	Asn
			340					345				350
Val	Ile	Phe	Phe	Ser	Leu	Val	Phe	Ile	Thr	Ala	Cys	Ser
	355					360				365		
Val	Phe	Val	Arg	Val	Thr	Thr	Asn	Pro	Val	Asp	Leu	Trp
	370				375				380			
Ser	Ser	Gln	Ala	Arg	Leu	Glu	Lys	Glu	Tyr	Phe	Asp	Gln
385				390					395			400
Pro	Phe	Phe	Arg	Thr	Glu	Gln	Leu	Ile	Ile	Arg	Ala	Pro
			405						410			415
Lys	His	Ile	Tyr	Gln	Pro	Tyr	Pro	Ser	Gly	Ala	Asp	Val
			420					425				430
Pro	Pro	Leu	Asp	Ile	Gln	Ile	Leu	His	Gln	Val	Leu	Asp
	435					440				445		
Ala	Ile	Glu	Asn	Ile	Thr	Ala	Ser	Tyr	Asp	Asn	Glu	Thr
	450				455				460			
Gln	Asp	Ile	Cys	Leu	Ala	Pro	Leu	Ser	Pro	Tyr	Asn	Thr
465				470					475			480
Ile	Leu	Ser	Val	Leu	Asn	Tyr	Phe	Gln	Asn	Ser	His	Ser
			485					490				495
His	Lys	Lys	Gly	Asp	Asp	Phe	Phe	Val	Tyr	Ala	Asp	Tyr
			500					505				510
Phe	Leu	Tyr	Cys	Val	Arg	Ala	Pro	Ala	Ser	Leu	Asn	Asp
	515					520				525		
Leu	His	Asp	Pro	Cys	Leu	Gly	Thr	Phe	Gly	Gly	Pro	Val
	530					535				540		
Leu	Val	Leu	Gly	Gly	Tyr	Asp	Asp	Gln	Asn	Tyr	Asn	Asn
545				550					555			560
Leu	Val	Ile	Thr	Phe	Pro	Val	Asn	Asn	Tyr	Tyr	Asn	Asp
			565					570				575
Leu	Gln	Arg	Ala	Gln	Ala	Trp	Glu	Lys	Glu	Phe	Ile	Asn

acgttcaggg caaactttcc cgtcctatTT aacttcaata tgtgcatctt ttacaggca
 5760
 ccttctcgtg gtagatgata gaggaccacc tccgctcctg tgctgttga ggtccgagaa
 5820
 tgatgcctca agaagagaac atacagctgc ccgtatatgg tagccattgc gatgtctctt
 5880
 tcggaaaggc tgggttttagt tgacttaggc gcagctggta attcaatctc aaatttgggc
 5940
 agcttcgaca tagtgccagc cctaaagtga aaaggctgca ggacattctc caggaccgtg
 6000
 gtagacagca agatcacggc gctctcgggg cagtacatgt accaattcac attgagattg
 6060
 tggtctttca agagtttcag actccgtttc tctggtaata cctggtaaaa ttcgattcct
 6120
 tgatctgtta tgaagacaat ttcagttgaa ctagtccagc agaatcctag aatgttggca
 6180
 ttcttagtct tgcactcctg tgtgtattcc agctgggaat tatcagggat aaaattacaa
 6240
 aaatccacag tctttgaggt cctctgaaca gccaatatct tattttctaa ggaaaactta
 6300
 atgcacttca cttctccttt gtcattcatt ctaaagtaga tgggattcct atcatctggg
 6360
 cctttaacta ccacgccagt agctccacca gatcgaacag caaaaacctg cttgttggcc
 6420
 tcatcgaaga agacgcagtt gacaggggtc gccttctcga actgcaccgg ccgctcgcac
 6480
 agctccagat agtagtctc ctcgcccattg gcgggcgcg cgcgcgcggc gggggccc
 6538

<210> 5494

<211> 1278

<212> PRT

<213> Homo sapiens

<400> 5494

Met Thr Ala Arg Gly Leu Ala Leu Gly Leu Leu Leu Leu Leu Cys
 1 5 10 15
 Pro Ala Gln Val Phe Ser Gln Ser Cys Val Trp Tyr Gly Glu Cys Gly
 20 25 30
 Ile Ala Tyr Gly Asp Lys Arg Tyr Asn Cys Glu Tyr Ser Gly Pro Pro
 35 40 45
 Lys Pro Leu Pro Lys Asp Gly Tyr Asp Leu Val Gln Glu Leu Cys Pro
 50 55 60
 Gly Phe Phe Phe Gly Asn Val Ser Leu Cys Cys Asp Val Arg Gln Leu
 65 70 75 80
 Gln Thr Leu Lys Asp Asn Leu Gln Leu Pro Leu Gln Phe Leu Ser Arg
 85 90 95
 Cys Pro Ser Cys Phe Tyr Asn Leu Leu Asn Leu Phe Cys Glu Leu Thr
 100 105 110
 Cys Ser Pro Arg Gln Ser Gln Phe Leu Asn Val Thr Ala Thr Glu Asp
 115 120 125
 Tyr Val Asp Pro Val Thr Asn Gln Thr Lys Thr Asn Val Lys Glu Leu
 130 135 140
 Gln Tyr Tyr Val Gly Gln Ser Phe Ala Asn Ala Met Tyr Asn Ala Cys

gccaaagtga acaccggatg gtgccaacca tcggttggtt ggcagcagct ttgaacgtag
4140
cgctgtgaa ctcaggaatg cacagttgac ttgggaagca gtattactag atctggaggc
4200
aaccacagga cactaaactt ctcccagcct cttcaggaaa gaaacctcat tctttggcaa
4260
gcaggaggtg acactagatg gctgtgaatg tgatccgctc actgacactc tgtaaaggcc
4320
aatcaatgca ctgtctgtct ctcttttag gagtaagcca tcccacaagt tctataccat
4380
attttttagt acagttgagg ttgtagatac actttataac attttatagt ttaaagagct
4440
ttattaatgc aataaattaa ctttgtacac atttttatat aaaaaaacag caagtgattt
4500
cagaatgttg taggcctcat tagagcttgg totccaaaaa tctgtttgaa aaaagcaaca
4560
tggtcttcac agtggtcccc tgggtgtaaa ttggggctcc ctgcgaaacg ctggtttcgc
4620
tgttcaaaaa agcgggaatat tgtatagaaa agcatgttgt cttcagtcctg ctttgacgca
4680
tctaaaaatt ttcgtgcaga aatgttgtca tggccaccaa tgccccggat aaaccttaag
4740
gcagctaaca cttggtgttt ggaaaggaga acttctacta tttcatcatt tgctgttgaa
4800
agtcgcttca gcatgtccag agatagctga tgagcaggag gatagaaact ctctagggat
4860
aacagcagac aagccaaagg tttggagtcg ctgaggacgt ggtactgcag gaactgatgc
4920
agcatataaa agaggttgtg ctggacaagg gttttgataa caagttcatg taggtaatgc
4980
tgtactgcaa tctgaaactg gttaagagaa cgaatgtatt ccatcagcac ggctatcaca
5040
aatttatgag gcatctcctt cttttgccga tagtgtttaa atactccgta gaggaagaaa
5100
tccacgaagg ctgacaggac atgggtgtac acatctgact ggtccagcac cgctgggtc
5160
cgcaccggcc tcttgaggag cgggctgctt cggctctgcc ctgcttcac cgccatcgca
5220
taactctgct cggcatccag gtacttttta tactcatggt tgagtttatc aaaaacagt
5280
gctatcacgg gcagcgatgc tctgtctgac tcacttaaca tctgtgaaca gacagacagg
5340
atgaccatct tgcatctcct tctctggagg agaaagtcca tgagtcttcc tttgtctggt
5400
aagagattta ctatgggtc aagtttact tggaggttcc agaggtaacc ttggcttgcg
5460
ctgataatga tgtcaggttg aaagacaatc caagatgaag aatagagttt acatggaaca
5520
ggagactggc tggtcacggc agcaggacct gtgatgggga tctgataggg ctggatcgat
5580
cgagcgggaa gcacgggggtg gtggaaggta acggagccgt caaactctcc ccgtaacttg
5640
atatgaata ttaccgatgt ctctgtatcc tgatgatgca cgactaccag gttgtccacc
5700

ttggcagtct tcattgactt tcttctgcag attacctgtt tcgtgagtct cttgggggta
2520
gacattaaac gtcaagagaa aaatcggcta gacatctttt gctgtgtcag aggtgctgaa
2580
gatggaacaa gcgtccaggc ctgagagagc tgtttgttcc gcttcttcaa aaactcctat
2640
tctccacttc tgctaaagga ctggatgaga ccaattgtga tagcaatatt tgtgggtgtt
2700
ctgtcattca gcctgcagc cctgaacaaa gtagatattg gattggatca gtctctttcg
2760
atgccagatg actcctacat ggtggattat ttcaaataca tcagtcagta cctgcatgcg
2820
ggtcgcctcg tgtactttgt cctggaggaa gggcacgact acacttcttc caaggggagc
2880
aacatggtgt gcggcgcat gggctgcaac aatgattccc tggcgcagca gatatttaac
2940
gcggcgagc tggacaatta taccgaata ggcttcgccc cctcgctcctg gatcgacgat
3000
tatttcgact ggggtgaagc acagtcgtct tgctgtcagc tggacaatat cactgaccag
3060
ttctgcaatg cttcagtggc tgacctgcc tcgcttcgct gcaggcctct gactccggga
3120
ggcaaacaga ggcctcaggg gggagacttc atgagattcc tgcccatggt cctttcggat
3180
aacccctaacc ccaagtgtgg caaaggggga catgctgcct atagtctctg agttaacatc
3240
ctccttgccc atggcaccag ggtcggagcc acgtacttca tgacctacca caccgtgctg
3300
cagacctctg ctgactttat tgacgctctg aagaaagccc gacttatagc cagtaatgct
3360
accgaaacca tgggcattaa cggcagtgcc taccgagtat ttccttacag tgtgttttat
3420
gtcttctacg aacagtacct gaccatcatt gacgacacta tcttcaacct cgggtgtgtcc
3480
ctgggcgcca tatttctggt gaccatggc ctctgggct gtgagctctg gtctgcagtc
3540
atcatgtgtg ccaccatcgc catggtcttg gtcaacatgt ttggagttat gtggctctgg
3600
ggcatcagtc tgaacgctgt atccttggtc aacctggtga tgagctgtgg catctccgtg
3660
gagttctgca gccacataac cagagcgctc acggtgagca tgaaaggcag ccgctggag
3720
cgcgcggaag aggcacttgc ccacatggc agctccgtgt tcagtggat cacacttaca
3780
aaatttgag ggattgtggt gttggctttt gccaaatctc aaattttcca gatattctac
3840
ttcaggatgt atttggccat ggtcttactg ggagccactc acggattaat atttctccct
3900
gtcttactca gttacatagg gccatcagta aataaagcca aaagttgtgc cactgaagag
3960
cgatacaaag gaacagagcg cgaacggctt ctaaatttct agccctctcg caggcatcc
4020
tgactgaact gtgtctaagg gtcggctggt ttaccactgg acgggtgctg catcggaag
4080

ggctgtgacg agtctgtgga tgaggtcaca gcaccatgta gctgccaaga ctgctctatt
900
gtctgtggcc ccaagcccca gccccacct cctcctgctc cctggacgat ccttggttg
960
gacgccatgt atgtcatcat gtggatcacc tacatggcgt ttttgcttgt gttttttgga
1020
gcattttttg cagtgtggtg ctacagaaaa cggatatttg tctccgagta cactcccatc
1080
gatagcaata tagctttttc tgttaatgca agtgacaaaag gagaggcgtc ctgctgtgac
1140
cctgtcagcg cagcatttga gggctgcttg aggcggctgt tcacacgctg ggggtcttcc
1200
tgcgtccgaa accctggctg tgtcattttc ttctcgctgg tcttcattac tgcgtgttgc
1260
tcaggcctgg tgtttgtccg ggtcacaacc aatccagttg acctctggtc agccccagc
1320
agccaggctc gcctggaaaa agagtacttt gaccagcact ttgggccttt cttccggacg
1380
gagcagctca tcatccgggc cctctcact gacaaacaca tttaccagcc atacccttgc
1440
ggagctgatg taccctttgg acctccgctt gacatacaga tactgcacca ggttcttgac
1500
ttacaaatag ccatcgaaaa cattactgcc tcttatgaca atgagactgt gacacttcaa
1560
gacatctgct tggccctctt ttcaccgtat aacacgaact gcaccatttt gagtgtgtta
1620
aattacttcc agaacagcca ttccgtgctg gaccacaaga aaggggacga cttctttgtg
1680
tatgccgatt accacacgca ctttctgtac tgcgtacggg ctctgcctc tctgaatgat
1740
acaagtttgc tccatgaccc ttgtctgggt acgtttggtg gaccagtgtt cccgtggctt
1800
gtgttgggag gctatgatga tcaaaactac aataacgcca ctgcccttgt gattaccttc
1860
cctgtcaata attactataa tgatacagag aagctccaga gggcccaggc ctgggaaaaa
1920
gagtttatta attttgtgaa aaactacaag aatcccaatc tgaccatttc cttcactgct
1980
gaacgaagta ttgaagatga actaaatcgt gaaagtgaca gtgatgtctt caccgttgta
2040
attagctatg ccatcatggt tctatatatt tccctagcct tggggcacat caaaagctgt
2100
cgcaggcttc tgggtggatc gaaggtctca ctaggcatcg cgggcatctt gatcgtgctg
2160
agctcgggtg cttgctcctt ggggtgtctc agctacattg ggttgccctt gaccctcatt
2220
gtgattgaag tcatccggtt cctggtgctg gctgttggag tggacaacat cttcattctg
2280
gtgcaggcct accagagaga tgaacgtctt caaggggaaa ccctggatca gcagctgggc
2340
agggtcctag gagaagtggc tcccagtatg ttctgtcat cttttctga gactgtagca
2400
ttttcttag gagcattgtc cgtgatgcca gcgtgcaca cttctctct ctttgcgga
2460

450	455	460
Ser Pro Lys Ser Ala Val Lys Thr Arg Gln Ala Phe Phe Leu His Thr		
465	470	475
Thr Tyr Phe Thr Lys Phe Ala Arg Gln Val Cys Lys Asn Thr Leu Arg		480
	485	490
Leu Arg Gln Ala Ala Arg Arg Pro Phe Val Ala Ile Asn Tyr Ala Ala		495
	500	505
Ile Arg Ala Glu Tyr Ala Asp Arg His Ala Glu Leu Ser Gly Ser Pro		510
	515	520
Leu Lys Ser Lys Ser Thr Arg Lys Pro Leu Ala Cys Ile Ile Gly Tyr		525
	530	535
Leu Glu Ile His Pro Ala Lys Lys Pro Asn Val Ile Arg Ser Thr Pro		540
545	550	555
Ser Leu Gln Thr Pro Thr Thr Lys Arg Met Leu Thr Thr Pro Asn His		560
	565	570
Thr Ser Leu Ser Ile Leu Gly Lys Arg Asn Tyr Ser His His Asn Gly		575
	580	585
Leu Asp Glu Leu Thr Cys Cys Val Ser Asp		590
595	600	

<210> 5493

<211> 6538

<212> DNA

<213> Homo sapiens

<400> 5493

```

nncttctga ccggcgcgcg cagcctgctg ccgcggtcag cgctgctcc tgctcctccg
60
ctcctcctgc gcggggtgct gaaacagccc ggggaagtag agccgcctcc ggggagccca
120
accagccgaa cgccgccggc gtcagcagcc ttgcgcggcc acagcatgac cgctcgcggc
180
ctggcccttg gctcctcct gctgctactg tgtccagcgc aggtgttttc acagtccctgt
240
gtttggtatg gagagtgtgg aattgcatat ggggacaaga ggtacaattg cgaatattct
300
ggccccacaa aaccattgcc aaaggatgga tatgacttag tgcaggaact ctgtccagga
360
ttcttctttg gcaatgtcag tctctgttgt gatgttcggc agcttcagac actaaaagac
420
aacctgcagc tgcctctaca gtttctgtcc agatgtccat cctgttttta taacctactg
480
aacctgtttt gtgagctgac atgtagccct cgacagagtc agtttttgaa tgttacagct
540
actgaagatt atgttgatcc tgttacaaac cagacgaaaa caaatgtgaa agagttacaa
600
tactacgtcg gacagagttt tgccaatgca atgtacaatg cctgccggga tgtggaggcc
660
ccctcaagta atgacaaggc cctgggactc ctgtgtggga aggacgctga cgctgtaat
720
gccaccaact ggattgaata catgttcaat aaggacaatg gacaggcacc ttttaccatc
780
actcctgtgt tttcagattt tccagtccat gggatggagc ccatgaacaa tgccaccaa
840

```

4667

gctccctttc tggggccatg gtgtccctgc tgtgtgtcag tggcatgtca ctgtggttca
 4320
 gtgagcacat ggggtggacgt gcagagactg tctgcgcagc ccccagcaga catgccctg
 4380
 ggggtgaggac acaggctctg caggctatct cccctctggt ctcatcctc gcctgcccac
 4440
 ccttcacttc ttaaagggtgc gcaagagagg agggccgact ggagggtgtc gccggaagg
 4500
 ttcagcctgc ccttcacaat tccccttggt cacagcccag tttccatctc tcagggccca
 4560
 cccaggaaaa tggatttcaa gtgggggttt tcatccagag atttgtttta caaaaacaa
 4620
 gaaaagctga gaggcaaac aggggagtga ggggcaacc agagggtggg aacaacaac
 4680
 gcaagccgcc cccatcctgt gactggctgg gcaccagggg aggacgcgtc accagagcct
 4740
 gggggccaagg cactggggg acctgccaca ctgtggacct gtctgggtgg ggctggagcc
 4800
 tcgagaagcc atgattcttg tcagaaacat tccccaggc agagagaggg ggccccagcc
 4860
 tctccctcc tcttggcctc cagagtcctg cagggtgcctc acagtagtga aaccagttg
 4920
 gaagcagctg ccctgggagc ctgggacagg cgaccaccg ggtcagtcct ctgccactca
 4980
 gagcagagca gggggctgag ggcaagcagg tggggctgtg cgtggcctca gtgcactcgg
 5040
 tgtcatgtct gagcctggtg tttatgcccc actgctgtcc taagtcctg gcgaggggag
 5100
 gtggaggagc tgccccgtgg gtgtttggag attctgtttt actctgccta gagaggaaac
 5160
 ggctttgggg agggaggggg aagcctttat tctttactgt tgtccctgtt ttcctttggg
 5220
 ggaatttact cagtttagcag cccctcctca ccattcccc caggaaggcc atgtccagt
 5280
 tttctgtcca cccctcctgt tcctctgcac tatgtctctg attttccctg ccaggggaagc
 5340
 taaccagag cacgcacctg tgetcatgag tgtttccgca ggataattcg ttctgagcat
 5400
 gataccacag tgtggattgt ctgtctgtaa ggagatgcca tctactaacc aatttgatt
 5460
 gtgtttccaa taaattcctg gaaattttgc ctggttttat gctgttcttt actaggatga
 5520
 tggctcaggt gtaagactgt gcacgcaccc ctagg
 5555

<210> 5492

<211> 602

<212> PRT

<213> Homo sapiens

<400> 5492

Asp	Trp	Arg	Leu	Pro	Thr	Arg	Ala	Ala	Thr	Gly	Gly	Phe	Pro	Arg	Asp
1				5					10				15		
Arg	Asp	Tyr	Val	Tyr	Phe	Glu	Asn	Ser	Ser	Ser	Asn	Pro	Tyr	Leu	Ile

actggtgttc tgcccggctc tgcttggcca cagacagctc cagcaagagc agttgttaaa
2700
agtccaagc gtgtgtatca ctgtgacaag ccgtttgctt actgccctgt tcccttgacg
2760
ccaaaccagc tgatgaagaa ctgctgccag gtgggtccta cagcagggtca caaatgacct
2820
agtttcattt taagcagaca gactctgttt ggcctagagg tgtggagtga gagaactgtg
2880
tttgtgggta tgagtctgtg tggccaaccc catgaccccc acccctccag cccaacatct
2940
tgtgagcaca tgtgacctag gccccggggg acctgcctgc tcctttggct tgggctcttc
3000
gtgtttccca cctgccctcg gcacgagccc ttggtggcat cacagttggc cactcagctg
3060
tgctgagtag ctgtgctact tgtgctggca gctgcaagga taggaatagc tcagcgcccg
3120
atgagctccc tgagcagatg tgaggctggc aactccccg ccctctgttt gcaggcacag
3180
ggtcacagtc ccaagaaaga caactggagt ctgatctccc agccatctct ggggttacta
3240
ggaggcagct ggatggcaga tacgagaggc ccaaatagcc aagctgttgc aagacagagt
3300
ggctacaatt gaattgacac cctgggaagc acgaggtaac ttggttaagga taatgatgct
3360
gtagatgtct gtgtcctcgg aggtctgagct ccgcttggca gagagagcgt gctgtgtgag
3420
gtggagggcg gttttgcaga catctcagct tcttttctga ggaggagttg gttctcatct
3480
taggcttctg caagggcgag catgggatgt ctccaccacc acccactctt ggagctgtgc
3540
tgggtcttgg cttggggcgc tgagggtggg gcctgtgtca gaagcatttg gtgagagggg
3600
tgagggtggc aggcaggggt tctctcagg gttccactg aggggtccct tcagcaaaga
3660
cctgggagga ggtgccgcat cacgtggatg tttcttcctt aaagaaaaag acacaggaaa
3720
gctgtctgtc tgtaccctgc tctggattta ttgtcgtact tggaccaga aggggaaatg
3780
attccctcac cctttcactt tctctctgaa cccctactaa gtggtgactg cagattctgg
3840
aaacaattag ctgccctga ctgagctgcc agcttcattt tctctgcctt ttgggagagg
3900
ccctctcacc caggcccaag agatttggag acaggagtca ggccaggctt gaagcaggag
3960
aaggagggcc cctctatct acccagttga catttggctt tgggaaaagc gcagcttgtt
4020
cgagccacgt gtgccaagca ggcttttctt tctcttcta agtaaaagctc gtggttctgt
4080
agtccagtca tctaggagg gtgatgttga ctgagacttc acgctctccc tttgtctctg
4140
gaaactgccc cctcgttctg acagaatccc ccaggcaatg gaggaagggt gccgaggcgc
4200
ctctagtctg tgcctttgcc gttggaagca tttggtgctg agagggttcc ccagccaccc
4260

gacttcaatg acatacggca agattttctt ccttggaat cattgactag catcattgaa
1080
tattattaca tgtggaaaac tactgacaga tatgtgcaac agaaacgtct aaaagcagca
1140
gaagctgaga gtaaactgaa acaagtatat atcccaacct acagcaaacc aaatcccaac
1200
caaatatcca ctagtaatgg gaagcctggg gctgtgaatg gagctgtggg gaccacgttc
1260
cagcctcaga atcctctctt agggagagcc tgtgagagct gctatgctac acagtctcac
1320
cagtgggtatt ctggggccc acctaatatg cagtgtagat tatgtgcaat ttgttggtt
1380
tattggaaaa aatatggagg cttgaaaatg cccacccagt cagaagaaga gaagttatct
1440
cctagcccaa ctacagagga cctcgtgtt agaagtcacg tgtcccgccg ggccatgacg
1500
ggaatgccag tccgaaacac tgggagtcga aagtctgcag tgaagaccg ccaagctttc
1560
ttccttcata ctacatattt cacaaaattt gctcgtcagg tctgcaaaaa taccctccg
1620
ctgcggcagg cagcaagacg gccgtttgtt gctattaatt atgctgccat tagggcagaa
1680
tatgccgaca gacatgctga actatctgga agtccactga aaagcaaaag cactaggaag
1740
cctttggcat gtatcattgg gtatttagag atccatcctg caaagaaacc taatgtaatt
1800
cgatctacac caagcctgca aaccccaact accaagcgga tgctaacaac tccaaatcac
1860
acatctctga gcattctggg gaaaagaaac tacagtcac acaatggctt ggatgaactc
1920
acgtgctgtg tgtcagactg agctttccct gattcattct acaatccaag acttgcgtga
1980
ctgtcctgct gatgttcaca gccgtgctg ggaagaaggc agccccactc ccagtacatt
2040
tcagtgggag acctctgcgt gcatccatgg agacgcaatg gggcggggaa ggaactgtgg
2100
gagtgcacgt tccaaatcct gtgtctccac gtgtggatca gcagcacctc gctttcttgt
2160
cagagacctc gctgttacgg agcgagacct gctgagaatt gaggggctga gggaaacctc
2220
ccacctctc ctttctgcag cgcctgcgc cccaccagc aacagcggcc acttggcagt
2280
ggggctgctg caagctcaga gccgtgcca cctgcatgt gtccgctcag ctcggtctta
2340
tgctgtatag ttactaaata tgtacaggag ggccatggca tctttctgaa tggatttttc
2400
ttaagaaatg cgccagtgtt tatgaggttc aaggattttc cctgtccttg ctgttaccgt
2460
cactcagctt tttctcgata ggcttcaccc ttgttttttt gaaatggggg aatttgcgtg
2520
ttacctctg cattectata tgtgacctc cctctactc ctccaaggaa cagaattacc
2580
gaggttctga caaaagataa gctgtaaac tcatcatctg tgttttgtgg ttggagagaa
2640

Pro	Val	Val	Ile	Asn	Lys	Val	Phe	Lys	Asp	Trp	Lys	Pro	Gly	Gly	Val
		275					280					285			
Ile	Ser	Cys	Arg	Asn	Cys	Gly	Glu	Val	Trp	Gly	Leu	Gln	Met	Ile	Tyr
		290				295					300				
Lys	Ser	Val	Lys	Leu	Pro	Val	Leu	Lys	Val	Arg	Ser	Met	Leu	Leu	Glu
305					310					315				320	
Thr	Pro	Gln	Gly	Arg	Ile	Gln	Ala	Lys	Lys	Trp	Ser	Arg	Val	Pro	Phe
			325					330					335		
Ser	Val	Pro	Asp	Phe	Asp	Phe	Leu	Gln	His	Cys	Ala	Glu	Asn	Leu	Ser
		340					345					350			
Asp	Leu	Ser	Leu	Asp											
		355													

<210> 5491

<211> 5555

<212> DNA

<213> Homo sapiens

<400> 5491

```

nntggcgagg cgggaagcac ccggaatctt cctggcccta gagcctgcag gctccaggcc
60
ggccccttga atctcacgcg gaggaaggca ccctgctgcc tgcacttatt tgcattccaag
120
agtttgcatt gagactggcg cttgcctact agggcagcca cagggggggt ccccaggggac
180
agagattatg tctactttga gaattcctcc agcaacccat acctaataag aaggatagaa
240
gaactcaaca agactgcaag tggcaacgtg gaagcaaaag tagtatgctt ttatagacga
300
cgtgatattt ccaacacact tataatgctc gcagataagc atgctaaaga aattgaggaa
360
gaatctgaaa caacagtga ggctgacttg accgataagc agaaacatca gttgaaacat
420
aggggaactct ttttgtcacg ccagtatgaa tctctgcccc caacacatat cagggggaaag
480
tgcagtgttg cccttctgaa tgagacagaa tcagtattgt catatcttga taaggaggat
540
accttcttct actcattggt ctatgacccc tcattgaaaa cactattagc tgacaaaggt
600
gaaatcagag tgggacctag atatcaagca gacattccag aaatgctgtt agaaggagaa
660
tcagatgaga gggaacaatc aaaattggaa gttaaagttt gggatccaaa tagcccactt
720
acggatcgac agattgacca gtttttagtt gtagcacgtg ctgttgggac attcgccaga
780
gccctggatt gcagcagttc tgtgaggcag cctagtgttc atatgagtgc tgctgcagct
840
tcccgagaca tcacctgtt tcacgctatg gatacattgt atagacacag ctatgatttg
900
agcagtgcc ttagtgtctt agtaccactc ggaggacctg ttttatgcag agatgaaatg
960
gaggaatggt cagcctctga agctagctta tttgaagagg cactggaaaa atatggcaaa
1020

```


cattgtgccg agaacttgtc ggacctctcc ctggactgac cacctcattg ctgcagtgcc
 1260
 cggtttgggc tgtagggggc gggagagtct gcagcagact ccaggcccct ccttcctgaa
 1320
 tcatcagctg tgggcatcag gccaccacgc cacacaggag tcctgggcac cctggccttag
 1380
 gctcccgc aa tgggaaaaca accggagggc cagagcttag tccagaccta ccttgtacgc
 1440
 acatagacat tttcatatgc actggatgga gttaggga aa ctgaggcaaa agaatttgcc
 1500
 atactgtact cagaatcacg acattccttc cctaccaagg ccacttctat tttttgaggc
 1560
 tcctcataaa aataaatgaa aaaatgggat agaaaaaaaa
 1600

<210> 5490

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5490

His	Asp	Ala	Pro	Arg	Val	Gln	Ile	Gly	Thr	Glu	Leu	Gln	Asp	Val	Val
1			5						10					15	
Asp	Gly	Pro	Ile	Glu	Phe	Gly	Gly	Pro	Glu	Asn	Pro	Lys	Leu	Glu	Met
		20						25					30		
Leu	Glu	Lys	Ile	Leu	Gln	Arg	Gln	Phe	Ser	Ser	Ser	Asn	Ser	Pro	Arg
		35					40					45			
Gly	Ile	Ile	Phe	Thr	Arg	Thr	Arg	Gln	Ser	Ala	His	Ser	Leu	Leu	Leu
	50					55					60				
Trp	Leu	Gln	Gln	Gln	Gln	Gly	Leu	Gln	Thr	Val	Asp	Ile	Arg	Ala	Gln
65					70				75					80	
Leu	Leu	Ile	Gly	Ala	Gly	Asn	Ser	Ser	Gln	Ser	Thr	His	Met	Thr	Gln
			85						90				95		
Arg	Asp	Gln	Gln	Glu	Val	Ile	Gln	Lys	Phe	Gln	Asp	Gly	Thr	Leu	Asn
		100						105				110			
Leu	Leu	Val	Ala	Thr	Ser	Val	Ala	Glu	Glu	Gly	Leu	Asp	Ile	Pro	His
		115					120				125				
Cys	Asn	Val	Val	Val	Arg	Tyr	Gly	Leu	Leu	Thr	Asn	Glu	Ile	Ser	Met
		130				135					140				
Val	Gln	Ala	Arg	Gly	Arg	Ala	Arg	Ala	Asp	Gln	Ser	Val	Tyr	Ala	Phe
145					150				155					160	
Val	Ala	Thr	Glu	Gly	Ser	Arg	Glu	Leu	Lys	Arg	Glu	Leu	Ile	Asn	Glu
			165					170					175		
Ala	Leu	Glu	Thr	Leu	Met	Glu	Gln	Ala	Val	Ala	Ala	Val	Gln	Lys	Met
		180						185					190		
Asp	Gln	Ala	Glu	Tyr	Gln	Ala	Lys	Ile	Arg	Asp	Leu	Gln	Gln	Ala	Ala
		195					200				205				
Leu	Thr	Lys	Arg	Ala	Ala	Gln	Ala	Ala	Gln	Arg	Glu	Asn	Gln	Arg	Gln
	210					215					220				
Gln	Phe	Pro	Val	Glu	His	Val	Gln	Leu	Leu	Cys	Ile	Asn	Cys	Met	Val
225					230					235				240	
Ala	Val	Gly	His	Gly	Ser	Asp	Leu	Arg	Lys	Val	Glu	Gly	Thr	His	His
			245					250					255		
Val	Asn	Val	Asn	Pro	Asn	Phe	Ser	Asn	Tyr	Tyr	Asn	Val	Ser	Arg	Asp

210		215		220	
Gln Leu Asn Gly Leu Ala Gly Tyr Phe Lys Gly Ile Gln Ala Arg Val					
225		230		235	240
Ile Tyr Gln Met Pro Ser Thr Ala Ile Ser Trp Ser Val Tyr Glu Phe					
	245		250		255
Phe Lys Tyr Phe Leu Thr Lys Arg Gln Leu Glu Asn Arg Ala Pro Tyr					
	260		265		270

<210> 5489

<211> 1600

<212> DNA

<213> Homo sapiens

<400> 5489

```

aaattttccgg ctcaactcag gcatctccag gtggtcatgg atttggtcca tgagcttctt
60
cagcaagtc ccaaacggat cctggctgcg cctgtggcag aggttgact gtttgcaagg
120
ctgttgctg tgcctctgca gctgggggca gcagttctgg ggtgacatga tgcaccacgt
180
gtccaaattg gcacagagct gcaggacgtg gttgatggcc ccatcgagtt tggaggccca
240
gagaatccaa aactggagat gctggaaaag atcctgcaaa ggcagttcag tagctctaac
300
agccctcggg gtatcatctt caccgcacc cgccaaagcg cacactccct cctgctctgg
360
ctccagcagc agcagggcct gcagactgtg gacatccggg ccagctact gattggggct
420
gggaacagca gccagagcac ccacatgacc cagagggacc agcaagaagt gatccagaag
480
ttccaagatg gaacctgaa ccttctggtg gccacgagtg tggcggagga ggggctggag
540
atccacatt gcaatgtggt ggtgcgttat gggctcttga ccaatgaaat ctccatggtc
600
caggccaggg gccgtgccc ggccgatcag agtggtatac cgttttagtc aactgaaggt
660
agccgggagc tgaagcggga gctgatcaac gaggcgctgg agacgctgat ggagcaggca
720
gtggctgctg tgcagaaaat ggaccaggcc gaggaccagg ccaagatccg ggatctgcag
780
caggcagcct tgaccaagcg ggcggcccag gcagcccagc gggagaacca gcggcagcag
840
ttccagtgag agcacgtgca gctactctgc atcaactgca tgggtggctgt gggccatggc
900
agcgacctgc ggaaggtgga gggcaccac catgtcaatg tgaaccccaa cttctcgaac
960
tactataatg tctccaggga tctgtggtc atcaacaaag tcttcaagga ctggaagcct
1020
gggggtgtca tcagctgcag gaactgtggg gaggtctggg gtctgcagat gatctacaag
1080
tcagtgaagc tgccagtgtc caaagtcgc agcatgctgc tggagacccc tcaggggagg
1140
atccaggcca aaaagtgtgc ccgcgtgccc ttctccgtgc ctgactttga cttcctgcag
1200

```

ttttttttgc aggggtgctgc ctatgggccc tctgctcccc aatgccttag agagaggagg
 1200
 ggacgggacg gcacggccgc tcaccggaag gctgtgtgcg gggacatccg aggtggtggt
 1260
 ggacaggaag gacttgggaa ggggagcgag aaattgcttt ttctcttcct ccctgggcag
 1320
 aatgtagctt ttctgcttca ctgtggcagc ctctccctg gatccttaga tcccagagga
 1380
 gggaagaaaa tttgcagtga ctgaaaacag taaaaaaaaa aaaatttatg tatataaaag
 1440
 ttgcattaca cagtacaaaa tagatggata atgtttatcc tttatttttc tatgtagaag
 1500
 tttttgaatt tgtgtgtgtg cttgtgctg tctacaccta gtattacggc tgggactctc
 1560
 cagctgtttt tgttgttgtt atgtttttta gaggggtgaa ttcttccatc aggtgaacga
 1620
 aaaaggcaac aaagtaataa atcagtgaat gtggccggca gctgtgttta gccctccag
 1680
 atggaagttt cacttgaatg taaaataata aagttt
 1716

<210> 5488

<211> 272

<212> PRT

<213> Homo sapiens

<400> 5488

Leu	Gly	Leu	Gln	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro	Lys	Ala
1				5					10					15	
Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Arg	Thr	Glu
			20					25					30		
Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met	Gly	Ala
			35				40					45			
Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met	Lys	Arg
			50			55					60				
Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu	Ala	Asn
65					70					75				80	
Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu	Leu	His	Asp	Ala	Val	Met	Asn
				85					90					95	
Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu	Gln	Met	Tyr	Asn	Ser	Gln	His
			100					105						110	
Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr	Val	Trp	Arg	Thr	Glu	Gly	Leu
			115				120					125			
Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr	Gln	Leu	Thr	Met	Asn	Ile	Pro
			130			135					140				
Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr	Glu	Phe	Leu	Gln	Glu	Gln	Val
145					150					155				160	
Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln	Ser	His	Ile	Ile	Ser	Gly	Gly
				165				170						175	
Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	Ala	Thr	Thr	Pro	Leu	Asp	Val	Cys
			180					185					190		
Lys	Thr	Leu	Leu	Asn	Thr	Gln	Glu	Asn	Val	Ala	Leu	Ser	Leu	Ala	Asn
			195			200					205				
Ile	Ser	Gly	Arg	Leu	Ser	Gly	Met	Ala	Asn	Ala	Phe	Arg	Thr	Val	Tyr

225		230		235		240									
Pro	Thr	Gln	Gln	Arg	Ser	Ile	Ala	Phe	Ser	Ser	Asn	Asn	Ser	Val	Ala
		245		250		255									
Lys	Pro	Ile	Gln	Lys	Ser	Ala	Lys	Ala	Ala	Thr	Glu	Glu	Ala	Ser	Ser
		260		265		270									
Arg	Ser	Pro	Lys	Ile	Asp	Gln	Lys	Lys	Ser	Pro	Tyr	Gly	Leu	Trp	Ile
		275		280		285									
Pro	Ile														
		290													

<210> 5487

<211> 1716

<212> DNA

<213> Homo sapiens

<400> 5487

acgccaccgg gtcggaggac tacgagaacc tgccgactag cgcctccgtg tccacccaca
 60
 tgacagcagg agcgatggcc gggatcctgg agcactcggc catgtacccg gtggactcgg
 120
 tgaagagaca gggctcttgc ttgtgccta ggctggagtg cagtgttgag atcatagttt
 180
 actgcagcct cgaactcctg ggtacaagga atcctccctc ctcagcctcc tgagttagctg
 240
 ggattacaga cacgaatgca gagtttgagt ccagatccca aagcccagta cacaagtatc
 300
 tacggagccc tcaagaaaat catgcggaac gaaggcttct ggaggccctt gcgagggcgtc
 360
 aacgtcatga tcatgggtgc agggccagcc catgccatgt attttgcctg ctatgaaaac
 420
 atgaaaagga ctttaaata cgttttccac caccaaggaa acagccacct agccaacggg
 480
 atagctggga gtagggccac cctgctccac gatgcggtaa tgaatccagc agaagtggg
 540
 aagcagcgtc tgcagatgta caactcgcag caccggtcag caatcagctg catccggacg
 600
 gtgtggagga ccgaggggtt gggggccttc tacggagct acaccacgca gctgaccatg
 660
 aacatccctt tccagtccat ccacttcac acctatgagt tctgcagga gcaggtaaac
 720
 cccaccgga cctacaacct gcagtccac atcatctcag gcgggctggc cggggccctc
 780
 gccgcggccg ccacgacccc cctggacgtc tgtaagacct ttctgaacac tcaggagaac
 840
 gtggccctct cgctggccaa catcagcggc cggctgtcgg gtagggccaa tgccttcgg
 900
 acggtgtacc agctcaacgg cctggccggc tacttcaaag gcatccaggc gcgtgtcatc
 960
 taccagatgc cctccaccgc catttcttgg tctgtctatg agttcttcaa gtactttctc
 1020
 accaagcggc agctggaaaa tcgagctcca tactaaagga agggatcata gaatcttttc
 1080
 ttaaagtcac tctctgcctg catccagccc cttgccctct cctcacacgt agatcatttt
 1140

caaagaagca tagcttttag ctctaataat tctgtagcaa agccaatata aaaatcagct
 1080
 aaagctgccca cagaagaggc atcttcaaga tcaccaaaaa tagatcagaa aaaaagtcca
 1140
 tatggactgt ggatacctat ctaaaagaag aaaactgatg gctaagtttg catgaaaact
 1200
 gcactttatt gcaagttagt gtttctagca ttatcccatc cctttgagcc attcaggggt
 1260
 acttgtgcat ttaaaaacca acacaaaaag atgtaaatac ttaacactca aatattaaca
 1320
 ttttaggttt ctcttgcaaga tatgagagat agcacagatg gaccaaaggt tatgcacagg
 1380
 tgggagtctt ttgtatatag ttgtaaatat tgtcttggtt atgtaaaaaat gaaatttttt
 1440
 agacacagta attgaactgt attcctgttt tgtatatatta ataaatttct tgttttcatt
 1500
 cttaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaga
 1549

<210> 5486

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5486

Met	Ser	Asn	Tyr	Val	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
			20					25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
		35				40					45				
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
	50					55					60				
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
65					70				75					80	
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
			85					90						95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
		100						105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
		115				120						125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
	130					135						140			
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
145					150					155				160	
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Asp	Arg	Met
			165					170						175	
Glu	Leu	Leu	Glu	Ile	Ala	Lys	Thr	Asn	Ala	Ala	Lys	Ala	Leu	Gly	Thr
		180						185					190		
Thr	Asn	Ile	Asp	Leu	Pro	Ala	Ser	Leu	Arg	Thr	Val	Pro	Ser	Ala	Lys
	195					200						205			
Glu	Thr	Ser	Arg	Gly	Ile	Gly	Val	Ser	Ser	Asn	Gly	Ala	Lys	Pro	Glu
	210					215					220				
Leu	Ser	Glu	Lys	Val	Thr	Glu	Asp	Gly	Thr	Arg	Asn	Pro	Asn	Glu	Lys

260 265 270
 Gln Lys Ile Leu Gln Glu Leu Cys Leu Ser Val Ile Thr Leu Phe
 275 280 285
 Pro Gly Ala Pro Val Val Leu Val Leu Cys Lys Asn Gly Asp Asp Arg
 290 295 300
 Gln Gln Trp Thr Lys Thr Gly Ser His Ile Glu His Ile Ala Ser His
 305 310 315 320
 Leu Cys Leu Asp Thr Asp Met Phe Gly Asp Gly Thr Glu Asn Gly Lys
 325 330 335
 Glu Ile Val Val Asn Pro Cys Glu Ser Ser Leu Met Ser Gln His Trp
 340 345 350
 Asp Met Val Ser Ser
 355

<210> 5485

<211> 1549

<212> DNA

<213> Homo sapiens

<400> 5485

nacgcgtgaa gggcggtacgc gatcgcgcgagg ggacagcgct actgcgggctt tggtcgcaca
 60
 gtgtaccgagg aggagcacag cagatggagg gacagctcca ggacgaggtt gtggaattcg
 120
 ccgttcgaaa gcaggggacta aaagcccccac ttcgtcttac gttccgaaag gaaggcgctc
 180
 gttgagcctt tctctcagtc gtgagggagg cgtcgacggc gtgcggaagt cctgagttga
 240
 ggcttgcgagg atccttttcg gagaaagcgc aggcataaagc cgcaggtgaa gatgtccaac
 300
 tacgtgaacg acatgtggcc gggctcgccg caggagaagg attcgccctc gacctcgagg
 360
 tcggggcggt ccagccgggt gtcgtcgagg tctaggagcc gctctttttc cagaagctct
 420
 cgggtccatt ccccggtctc gagccgggtt tcgtccagga gtcggaggag caagtccagg
 480
 tcccgttccc gaaggcgcca ccagcggaag tacaggcgct actcgcggtc atactcgagg
 540
 agccggtcgc gatcccgag ccgccgttac cgagagaggc gctacgggtt caccaggaga
 600
 tactaccggt ctcttcgag gtaccgggtc cgggtccgta gcaggtcgag ctctcgaggga
 660
 aggtcgtagt gcggaagggt gtaacgagtc gcgcggggac agcgctacta cggctttggt
 720
 cgcacagtgt acccgaggga gcacagcaga tggagggaca gatccaggac gaggtcgagg
 780
 agcagaacct cctttcgctt aagtgaataa gatcgaatgg agctgttaga aatagcaaaa
 840
 accaatgcag cgaaagctct aggaacaacc aacattgact tgccagctag tctcagaact
 900
 gttccttcag ccaaagaaac aagccgtgga ataggtgtat caagtaatgg tgcaaagcct
 960
 gaactgtcgg aaaaggtaac agaagatgga actcgaaatc ccaatgaaaa acctaccag
 1020

tgggcagcaa gcagcctgca accacctcag acatcctgga ctgggaggtg gaggcagagc
 1200
 cccccaggac aggagcaact gtctcagga ggacagagga aaacatcaca agccaatggg
 1260
 gctcaaagac aaatcccaca tgttctcaag gccgttaagt tccagtcctg gccagtcatt
 1320
 ccctgattgg tatctggaga cagaaacctt atgggaagtg tttattgttc cttttcctac
 1380
 aaaggaagca gtctctggag gccagaaaga aaagccttct ttttactag gccaggacta
 1440
 cattgagaga tgaagaatgg aggttggttc caaaagaaat aaagagaaac ttagaagttg
 1500
 tctctggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1552

<210> 5484

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5484

Thr	Phe	Leu	Asp	Ser	His	Cys	Glu	Val	Asn	Arg	Asp	Trp	Leu	Gln	Pro
1				5					10					15	
Leu	Xaa	Asp	Arg	Val	Lys	Glu	Asp	Tyr	Thr	Arg	Val	Val	Cys	Pro	Val
			20					25					30		
Ile	Asp	Ile	Ile	Asn	Leu	Asp	Thr	Phe	Thr	Tyr	Ile	Glu	Ser	Ala	Ser
	35						40					45			
Glu	Leu	Arg	Gly	Gly	Phe	Asp	Trp	Ser	Leu	His	Phe	Gln	Trp	Glu	Gln
	50				55						60				
Leu	Ser	Pro	Glu	Gln	Lys	Ala	Arg	Arg	Leu	Asp	Pro	Thr	Glu	Pro	Ile
65					70				75					80	
Arg	Thr	Pro	Ile	Ile	Ala	Gly	Gly	Leu	Phe	Val	Ile	Asp	Lys	Ala	Trp
				85				90						95	
Phe	Asp	Tyr	Leu	Gly	Lys	Tyr	Asp	Met	Asp	Met	Asp	Ile	Trp	Gly	Gly
		100						105					110		
Glu	Asn	Phe	Glu	Ile	Ser	Phe	Arg	Val	Trp	Met	Cys	Gly	Gly	Ser	Leu
	115						120					125			
Glu	Ile	Val	Pro	Cys	Ser	Arg	Val	Gly	His	Val	Phe	Arg	Lys	Lys	His
	130					135					140				
Pro	Tyr	Val	Phe	Pro	Asp	Gly	Asn	Ala	Asn	Thr	Tyr	Ile	Lys	Asn	Thr
145					150					155				160	
Lys	Arg	Thr	Ala	Glu	Val	Trp	Met	Asp	Glu	Tyr	Lys	Gln	Tyr	Tyr	Tyr
			165					170						175	
Ala	Ala	Arg	Pro	Phe	Ala	Leu	Glu	Arg	Pro	Phe	Gly	Asn	Val	Glu	Ser
		180						185					190		
Arg	Leu	Asp	Leu	Arg	Lys	Asn	Leu	Arg	Cys	Gln	Ser	Phe	Lys	Trp	Tyr
	195					200						205			
Leu	Glu	Asn	Ile	Tyr	Pro	Glu	Leu	Ser	Ile	Pro	Lys	Glu	Phe	Ser	Ile
	210					215					220				
Gln	Lys	Gly	Asn	Ile	Arg	Gln	Arg	Gln	Lys	Cys	Leu	Glu	Ser	Gln	Arg
225					230					235				240	
Gln	Asn	Asn	Gln	Glu	Thr	Pro	Asn	Leu	Lys	Leu	Ser	Pro	Cys	Ala	Lys
			245					250						255	
Val	Lys	Gly	Glu	Asp	Ala	Lys	Ser	Gln	Val	Trp	Ala	Phe	Thr	Tyr	Thr

115	120	125
Asn Tyr Glu Ser Ala Pro Pro Ser Pro Gln Tyr Lys Lys Ile Ile Cys		
130	135	140
Met Gly Ala Lys Glu Asn Gly Leu Pro Leu Glu Tyr Gln Glu Lys Leu		
145	150	155
Lys Ala Ile Glu Pro Asn Asp Tyr Thr Gly Lys Val Ser Glu Glu Ile		
165	170	175
Glu Asp Ile Ile Lys Lys Gly Glu Thr Gln Thr Leu		
180	185	

<210> 5483

<211> 1552

<212> DNA

<213> Homo sapiens

<400> 5483

```

actttcctcg acagccactg tgagggtgaac agggactggc tccagcctct ntngacagg
60
gtcaaagagg actacacgcg ggtggtgtgc cctgtgatcg atatcattaa cctggacacc
120
ttcacctaca tcgagtctgc ctcggagctc agaggggggt ttgactggag cctccacttc
180
cagtgggagc agctctcccc agagcagaag gtcgggcgcc tggacccacac ggagcccatc
240
aggactccta tcatagctgg agggctcttc gtgatcgaca aagcttggtt tgattacctg
300
gggaaatatg atatggacat ggacatctgg ggtggggaga actttgaaat ctccttccga
360
gtgtggatgt gcgggggagc cctagagatc gtcccttgca gccgagtggg gcacgtcttc
420
cggaagaagc acccctacgt tttccctgat ggaaatgcc aacagtatat aaagaacacc
480
aagcggacag ctgaagtgtg gatggatgaa tacaagcaat actattacgc tgcccggcca
540
ttcgccctgg agaggccctt cggaatggt gagagcagat tggacctgag gaagaatctg
600
cgctgccaga gcttcaagtg gtacctggag aatatctacc ctgaactcag catccccaag
660
gagttctcca tccagaaggc caatatccga cagagacaga agtgacctgga atctcaaagg
720
cagaacaacc aagaaacccc aaacctaag ttgagccctt gtgccaaagt caaaggcgaa
780
gatgcaaagt cccaggtatg ggccttcaca tacaccaga agatcctcca ggaggagctg
840
tgccctgtag tcatcacctt gttccctggc gcccagtggt ttcttgcctt ttgcaagaat
900
ggagatgacc gacagcaatg gacaaaaact ggttcccaca tcgagcacat agcatccac
960
ctctgcctcg atacagatat gttcggtgat ggcaccgaga acggcaagga aatcgctcgtc
1020
aaccatgtg agtccctcact catgagccag cactgggaca tggtagctc ttgaggaccc
1080
ctgccagaag cagcaagggc catgggggtg tgcttccctg gaccagaaca gactggaaac
1140

```


aaaagtggaa tgtatgttgt aatagaagtt aaagttgcaa ctcaagaagg aaaagaaata
 660
 acctgtcgaa gttatctgat gacaaattac gaaagtgtc ccccatcccc acagtataaa
 720
 aagattatTTT gcatgggtgc aaaagaaaat ggTTTgcccGc tggagtatca agagaagtta
 780
 aaagcaatag aaccaaata ctatacagga aaggtctcag aagaaattga agacatcatc
 840
 aaaaaggggg aaacacaaac tctttagaac ataacagaat atatctaagg gtattctatg
 900
 tgctaataata aaatatTTTT aacacttgag aacaggggatc tgggggatct ccacgtttga
 960
 tccattttca gcagtgtctt gaaggagtat cttacttggg tgattccttg ttttagact
 1020
 ataaaaagaa actgggatag gagttagaca atttaaaagg ggtgtatgag ggctgaaat
 1080
 atgtgacaaa tgaatgtgag tacccttctt gtgaacactg aaagctattc tcttgaattg
 1140
 atcttaagtG tctccttgct ctggtaaaag atagatttGt agctcacttg atgatgggtGc
 1200
 tgggtgaattg ctctgctctg tctgagattt ttaaaaatca gcttaatgag agtaatctGc
 1260
 agacaattga taataacatt ttgaaaattg gaaagatggT atactgtttt tagaggaata
 1320
 aacgtatttg tggtttaaaa aaaaaagagc aacttccttt gcactgtata cccttttgta
 1380
 ttattaggat tttatactat gtttatatgt tgcctattta ataaatcgct taaagttata
 1440
 tatcttgaat atctttccat aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1500
 aaaaaaaaaa aaa
 1513

<210> 5482

<211> 188

<212> PRT

<213> Homo sapiens

<400> 5482

Met	Ala	Asn	Ser	Gly	Cys	Lys	Asp	Val	Thr	Gly	Pro	Asp	Glu	Glu	Ser
1				5					10				15		
Phe	Leu	Tyr	Phe	Ala	Tyr	Gly	Ser	Asn	Leu	Leu	Thr	Glu	Arg	Ile	His
			20					25				30			
Leu	Arg	Asn	Pro	Ser	Ala	Ala	Phe	Phe	Cys	Val	Ala	Arg	Leu	Gln	Asp
		35				40					45				
Phe	Lys	Leu	Asp	Phe	Gly	Asn	Ser	Gln	Gly	Lys	Thr	Ser	Gln	Thr	Trp
	50				55				60						
His	Gly	Gly	Ile	Ala	Thr	Ile	Phe	Gln	Ser	Pro	Gly	Asp	Glu	Leu	Trp
65				70				75						80	
Gly	Val	Val	Trp	Lys	Met	Asn	Lys	Ser	Asn	Leu	Asn	Ser	Leu	Asp	Glu
			85				90						95		
Gln	Glu	Gly	Val	Lys	Ser	Gly	Met	Tyr	Val	Val	Ile	Glu	Val	Lys	Val
			100				105					110			
Ala	Thr	Gln	Glu	Gly	Lys	Glu	Ile	Thr	Cys	Arg	Ser	Tyr	Leu	Met	Thr

35 40 45
 Glu Ala Glu Ala Arg Ala Glu Arg Glu Ala Glu Ala Arg Arg Arg Glu
 50 55 60
 Glu Gln Glu Ala Arg Glu Lys Ala Gln Ala Glu Gln Glu Glu Gln Glu
 65 70 75 80
 Arg Leu Gln Lys Gln Lys Glu Glu Ala Glu Ala Arg Ser Arg Glu Glu
 85 90 95
 Ala Glu Arg Gln Arg Leu Glu Arg Glu Lys His Phe Gln Gln Gln Glu
 100 105 110
 Gln Glu Arg Gln Glu Arg Arg Lys Arg Leu Glu Glu Ile Met Lys Arg
 115 120 125
 Thr Arg Lys Ser Glu Val Ser Glu Thr Lys Gln Lys Gln Asp Ser Lys
 130 135 140
 Glu Ala Asn Ala Asn Gly Ser Ser Pro Glu Pro Val Lys Ala Val Glu
 145 150 155 160
 Ala Arg Ser Pro Gly Leu Gln Lys Glu Ala Val Gln Lys Glu Glu Pro
 165 170 175
 Ile Pro Gln Glu Pro Gln Trp Ser Leu Pro Ser Lys Glu Leu Pro Ala
 180 185 190
 Ser Leu Val Asn Gly Leu Gln Pro Leu Pro Ala His Gln Glu Asn Gly
 195 200 205
 Phe Ser Thr Asn Gly Pro Ser Gly Asp Lys Ser Leu Ser Arg Thr Pro
 210 215 220
 Glu Thr Leu Leu Pro Phe Ala Glu Ala Glu Ala Phe Leu Lys Lys Ala
 225 230 235 240
 Val Val Gln Ser Pro Gln Val Thr Glu Val Leu
 245 250

<210> 5481

<211> 1513

<212> DNA

<213> Homo sapiens

<400> 5481

tgtccaatga ggagccagcg ccggattgct tcaggacaga ctatttctga gtctcggcgg
 60
 aaggcggagg gaaggccgtg gggatggcca atcaaagggg gcgactcagg tcgggtgggga
 120
 ccggcagcca atcaggagag cgctcgctcc tgactcgacc ggcccacgct tcccgccagt
 180
 cccctaaccg tgaggctgcc gcgcggcggt cactgcgccg gggtagtggg cccagtggt
 240
 gcgctctctg gccgttcctt acactttgct tcaggctcca gtgcaggggc gtagtgggat
 300
 atggccaact cgggctgcaa ggacgtcacg ggtccagatg aggagagttt tctgtacttt
 360
 gcctacggca gcaacctgct gacagagagg atccacctcc gaaacccctc ggcggcgttc
 420
 ttctgtgtgg ccgcctgca ggattttaag cttgactttg gcaattccca aggcaaaaca
 480
 agtcaaactt ggcattggagg gatagccacc atttttcaga gtcctggcga tgaattgtgg
 540
 ggagtagtat ggaaaatgaa caaaagcaat tttaaattctc tggatgagca agaaggggtt
 600

cggagggcggg aggagcagga ggcacgagag aaggcgcagg ccgagcagga ggagcaggag
 240
 cggtctgcaga agcagaaaga ggaggccgaa gctcggctgc gggaagaggc ggagcggcag
 300
 cgtctggagc gggaaaagca cttccagcag caggagcaag agcggcaaga gcgcagaaaag
 360
 cgtctggagg agatcatgaa gaggactcgg aagtcagaag tttctgaaac caagcagaag
 420
 caggacagca aggaggccaa cgccaacggg tccagcccag agcctgtgaa agctgtggag
 480
 gctcgggtccc cagggtgca gaaggaggct gtgcagaaag aggagcccat cccacaggag
 540
 cctcagtgga gtctcccaag caaggagttg ccagcgtccc tggatgaatgg cctgcagcct
 600
 ctcccagcac accaggagaa tggcttctcc accaacggac cctctgggga caagagtctg
 660
 agccgaacac cagagacact cctgcccttt gcagaggcag aagccttctt caagaaagct
 720
 gtgggtgcagt cccgcaggt cacagaagtc ctttaagagg gtttgccttg gatccgggca
 780
 cagttgtgag ggctcctctg catcacctac caggatgtct ggaggagaaa aagacagaac
 840
 aaagatggaa gtggcctggg cccctggggg tgggtcctct ctgttgtttt taatctgcac
 900
 cttatagact gatgtctctt tggccggagc cagatctgcc cctcagtgca ttcgtgtgct
 960
 cgcacgcgca gacatccctt ctccccata cacacatata cactcacagc ctctctggcc
 1020
 tcttcccttg gggagggggc acctgtagta tttgccttga tttggtgggg tacagtggat
 1080
 gtgaatactg taaatagctt gtgctcagac tcctctgcgt ggagaggggtg ggtgcaggag
 1140
 gcagaccctc cccccaaagc cccctgggga gatcttctc tctctattta actgtaactg
 1200
 aggggggatcc caggtctggg gatgggggac accttggggc acaggatact ggttgcttca
 1260
 ggggtaccca tgccccctgc cctgcctgg aatcagtgtt actgcatctg attaaatgtc
 1320
 tccagaaata aagaataatt ctgccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1380
 aaaaaa
 1386

<210> 5480

<211> 251

<212> PRT

<213> Homo sapiens

<400> 5480

Ala	Gly	Thr	Thr	Asp	Arg	Glu	Glu	Ala	Thr	Arg	Leu	Leu	Ala	Glu	Lys
1				5					10					15	
Arg	Arg	Gln	Ala	Arg	Glu	Gln	Arg	Glu	Arg	Glu	Glu	Gln	Glu	Arg	Arg
		20					25					30			
Leu	Gln	Ala	Glu	Arg	Asp	Lys	Arg	Met	Arg	Glu	Glu	Gln	Leu	Ala	Arg

gggccccccc gcccatgggg ttgggctggt ccttatagtg cctacgttag tctgtgtgga
 240
 gcccttgccc agcgggggag aaaaagggtg cttctgggtcc gtctgtataa aacatggccc
 300
 ctcacctgtc ggccccccac acagctggca ggctgggctg gcctctcacc cctggcctcc
 360
 cctggacccc tggctggctc ctcaacttca ctctccgcac ttagtgcccg gccgccccca
 420
 gactcatcgt cgtcagccc ataggggaagc ccaggcctgg ccccagaga gtctccttcc
 480
 gagtctctct cgaagcccat gagctggtea ctgttgccgt cgccttcttc ctcttctct
 540
 tcctctcaa actccagatc ctggcctagt agcaaatac tctccaatac caggggccccg
 600
 ggtccttcgt cgaggagtc ttcagtatcc actttgaccc cctcgcatth caggggctgc
 660
 ggggtggcttt gcttcttctg gggcatcgtg accggctcca gcccgacgcg cctccggcct
 720
 gcggccg
 727

<210> 5478

<211> 99

<212> PRT

<213> Homo sapiens

<400> 5478

Ser	Ala	Ser	Val	Lys	Ala	Arg	Ser	Pro	Gly	Pro	Tyr	Gly	Pro	Pro	Arg
1				5					10					15	
Pro	Trp	Gly	Trp	Ala	Gly	Pro	Tyr	Ser	Ala	Tyr	Val	Ser	Leu	Cys	Gly
			20					25					30		
Ala	Pro	Gly	Gln	Arg	Gly	Arg	Lys	Arg	Trp	Leu	Leu	Val	Arg	Leu	Tyr
		35					40					45			
Lys	Thr	Trp	Pro	Leu	Thr	Cys	Arg	Pro	Pro	Thr	Gln	Leu	Ala	Gly	Trp
		50				55					60				
Ala	Gly	Leu	Ser	Pro	Leu	Ala	Ser	Pro	Gly	Pro	Leu	Ala	Gly	Ser	Ser
65					70				75					80	
Thr	Ser	Leu	Ser	Ala	Leu	Ser	Ala	Arg	Pro	Pro	Pro	Asp	Ser	Ser	Ser
				85					90					95	
Leu	Ser	Pro													

<210> 5479

<211> 1386

<212> DNA

<213> Homo sapiens

<400> 5479

gccggcacca cagaccgaga agaagccact cggctcttgg ctgagaagcg gcgccaggcc
 60
 cgaggagcagc gggagcgcga ggagcaggag cggaggctgc aggcagaaag ggacaagcga
 120
 atgcgagagg agcagctggc acgggaggcc gagggccggg cggagcggga ggcggaggcc
 180

cctgagaaga aagcagcggg cggggcgcca cggagggggc ctctgggggg acggaaaaaa
 540
 aagaaggcgc cgtcagcctc cgactccgac tccaaggccg attcggacgg ggccaagcct
 600
 gagccggtgg ccatggcgcg gtcggcgt
 628

<210> 5476
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 5476
 Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro Tyr
 1 5 10 15
 Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys Gly Phe
 20 25 30
 Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala Ser Tyr Ser
 35 40 45
 Ala Pro Pro Pro Val Ser Ser Ser Asp Ser Glu Ala Pro Glu Ala Asn
 50 55 60
 Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp Glu Asp Arg Gly Val
 65 70 75 80
 Met Ala Val Thr Ala Val Thr Ala Thr Ala Ala Ser Asp Arg Met Glu
 85 90 95
 Ser Asp Ser Asp Ser Asp Lys Ser Ser Asp Asn Ser Gly Leu Lys Arg
 100 105 110
 Lys Thr Pro Ala Leu Lys Met Ser Val Ser Lys Arg Ala Arg Lys Ala
 115 120 125
 Ser Ser Asp Leu Asp Gln Ala Ser Val Ser Pro Ser Glu Glu Glu Asn
 130 135 140
 Ser Glu Ser Ser Ser Glu Ser Glu Lys Thr Ser Asp Gln Asp Phe Thr
 145 150 155 160
 Pro Glu Lys Lys Ala Ala Val Arg Ala Pro Arg Arg Gly Pro Leu Gly
 165 170 175
 Gly Arg Lys Lys Lys Lys Ala Pro Ser Ala Ser Asp Ser Asp Ser Lys
 180 185 190
 Ala Asp Ser Asp Gly Ala Lys Pro Glu Pro Val Ala Met Ala Arg Ser
 195 200 205
 Ala

<210> 5477
 <211> 727
 <212> DNA
 <213> Homo sapiens

<400> 5477
 ttttttggtta gtgtttcctt tattataaag cactgaaata agttaataa acaggtggga
 60
 ggctgggcag tccccagcc ggtttgcca cagcccctgg gggcagtgga ggtgaataca
 120
 gggcccttct cactgagctc gtgaagtgcc tcaagtcaagg caaggtcccc tgggccatat
 180

ttttgatcac gacctcttta gctttgcaga tttgatcttt gggaagtggc ctgtggttct
 600
 tatcaccaat cctaaatcac tcctttatag ttgtggtgaa catgaaccac tagaaagact
 660
 tcttcactca acccacatta gattggtaac a
 691

<210> 5474
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 5474
 Met Lys Lys Met Glu Glu Leu Leu Leu Leu Ala Lys Glu Ser Ser Arg
 1 5 10 15
 Ser Asn His Thr Ile Trp Phe Gly His Phe Thr Thr Ser Thr Ile Leu
 20 25 30
 Ser Pro Ser Pro Gly Ile Arg Ser Ile Met Ser Ser Ala Ile Ala Tyr
 35 40 45
 Leu Cys Gly His Leu His Thr Leu Gly Gly Leu Met Pro Val Leu His
 50 55 60
 Thr Arg His Phe Gln Gly Thr Leu Glu Leu Glu Val Gly Asp Trp Lys
 65 70 75 80
 Asp Asn Arg Arg Tyr Arg Ile Phe Ala Phe Asp His Asp Leu Phe Ser
 85 90 95
 Phe Ala Asp Leu Ile Phe Gly Lys Trp Pro Val Val Leu Ile Thr Asn
 100 105 110
 Pro Lys Ser Leu Leu Tyr Ser Cys Gly Glu His Glu Pro Leu Glu Arg
 115 120 125
 Leu Leu His Ser Thr His Ile Arg Leu Val Thr
 130 135

<210> 5475
 <211> 628
 <212> DNA
 <213> Homo sapiens

<400> 5475
 ggcacacacg aaacagcctt cctgggaccc aaggacctgt tcccctacga caaatgtaaa
 60
 gacaagtacg ggaagcccaa caagaggaaa ggcttcaatg aagggtgtg ggagatccag
 120
 aacaaccccc acgccagcta cagcgccctt ccgccagtga gctcctccga cagcgaggcc
 180
 cccgaggcca accccgccga cggcagtgc gctgacgagg acgatgagga ccgggggggc
 240
 atggccgtca cagcggtaac cgccacagct gccagcgaca ggatggagag cgactcagac
 300
 tcagacaaga gtagcgacaa cagtggcctg aagaggaaga cgctgcgct aaagatgtcg
 360
 gtctcgaaac gagcccgaaa ggcctccagc gacctggatc aggccagcgt gtcccatcc
 420
 gaagaggaga actcggaag ctcatctgag tcggagaaga ccagcgacca ggacttcaca
 480

<210> 5472

<211> 161

<212> PRT

<213> Homo sapiens

<400> 5472

```

Met Leu Cys Gly Ser Arg His Thr Arg Val Thr His Thr Gln Pro Cys
 1             5             10             15
Pro Arg Leu Pro Pro His Pro His Pro Asp Lys Arg Thr Leu Trp Ser
      20             25             30
Pro Ser Ala His Leu Leu Gly Leu His Thr Gln Arg His Ala Asp Gly
      35             40             45
Phe Leu Cys Leu Cys Thr His Ala Gly Ala Gly Gly Ser Val His Thr
      50             55             60
Pro Pro Arg Leu Arg Ala Arg Pro Tyr Met Pro Cys Ala Pro Thr Gln
      65             70             75             80
Ala Gly Leu Gly Ser Leu His Ser Pro Leu Arg Val His Ser His Ile
      85             90             95
Ala Thr His Ser Cys Pro His Lys Leu Val Ser Leu Tyr Ser Ala His
      100            105            110
Gly His Thr Cys Ala Pro His Leu Ala Thr Arg Thr Pro Gly Leu Cys
      115            120            125
Ile Pro His Pro Gly Ser Gly Pro Arg Val Val Gly Pro Ala Gly Ser
      130            135            140
Ala Ala Ala Ser Ala Arg Thr Val Leu Phe Leu Arg Pro Arg Gly Ala
      145            150            155            160
Ala

```

<210> 5473

<211> 691

<212> DNA

<213> Homo sapiens

<400> 5473

```

gcgaccagca gcgctggtgg ccatgctctt ggacactacg gcctggcggg cagccctcgc
60
cgctgccgcg ccccgcgccc ccaggaggcc gcaccctgcg ccaggggccc gagacagcaa
120
catcttcttg ggctgcagg agacctgaca gatgccaaaa caaaggaaca gttgggatcc
180
aggcagcatg aggtagaatg gcaaacctac cagggtattc tgaagaagac aagagtcatg
240
gaaaaaacca agtggctgga tatcaaagga aatcatgaaa aagatggagg agctcttatt
300
actggccaag gaaagcagtc ggagcaacca tacaatttgg tttggacact ttacaacatc
360
cactattctt tctccatcac caggaatccg gtcaataatg agttcggcta tagcttattt
420
gtgtggacat ctccatacac ttggtggact gatgcctggt ttgcacactc gtcacttcca
480
gggcactttg gaacttgagg tgggagactg gaaggataat aggaggtacc ggatttttgc
540

```

195 200 205
 Asp Ala Leu Lys Gln Arg Ala Glu Gln Ser Ile Ser Glu Glu Pro Gly
 210 215 220
 Trp Glu Glu Glu Glu Glu Glu Leu Met Gly Ile Ser Pro Ile Ser Pro
 225 230 235 240
 Lys Glu Ala Lys Val Pro Val Ala Lys Ile Ser Thr Phe Pro Glu Gly
 245 250 255
 Glu Pro Gly Pro Gln Ser Pro Cys Glu Glu Asn Leu Val Thr Ser Val
 260 265 270
 Glu Pro Pro Ala Glu Val Thr Pro Ser Glu Ser Ser Glu Ser Ile Ser
 275 280 285
 Leu Val Thr Gln Ile Ala Asn Pro Ala Thr Ala Pro Glu Ala Arg Val
 290 295 300
 Leu Pro Lys Asp Leu Ser Gln Lys Leu Leu Glu Ala Ser Leu Glu Glu
 305 310 315 320
 Gln Gly Leu Ala Val Asp Val Gly Glu Thr Gly Pro Ser Pro Ile
 325 330 335
 His Ser Lys Pro Leu Thr Pro Ala Gly His Thr Gly Gly Pro Glu Pro
 340 345 350
 Arg Pro Pro Ala Arg Val Glu Thr Leu Arg Glu Glu Ala Pro Thr Asp
 355 360 365
 Leu Arg Val Phe Glu Leu Asn Ser Asp Ser Gly Lys Ser Thr Pro Ser
 370 375 380
 Asn Asn Gly Lys Lys Gly Ser Ser Thr Asp Ile Ser Glu Asp Trp Glu
 385 390 395 400
 Lys Asp Phe Asp Leu Asp Met Thr Glu Glu Val Gln Met Ala Leu
 405 410 415
 Ser Lys Val Asp Ala Ser Gly Glu Leu Lys Met
 420 425

<210> 5471

<211> 534

<212> DNA

<213> Homo sapiens

<400> 5471

cggcgccecc gcgggggccc agaaatagga ccgtcctggc agaggctgca gccgacccag
 60
 ctggcccccac tacgcggggc ccagagccag ggtgggggat gcagagaccg ggcgtgcggg
 120
 ttgccaggtg tggcgccacat gtgtgcccgt gggcagagta cagagacaca agcttgtgtg
 180
 gacacgaatg tgtagctatg tgcgagtgcac caggagtggt tgagtgcagg gacccaggc
 240
 cggcctgcgt cgggtgcgcag ggcataatagg ggcgtgcacg cagtcttga ggtgtgtgca
 300
 cagagccccc ggcacccgcg tgtgtgcaaa gacacaggaa cccgtctgcg tggcgctgtg
 360
 tgtgcaaccc aaggaggtgg gcgcttgac tccaaagtgt gcgcttatcc ggatgtggat
 420
 gtgggggacg ccggggacag ggctgggtgt gcgtgactcg ggtgtgccgg gacccacaga
 480
 gcatatgtgt ccattgcctg tgctgtgact catgtccctg ggggtgggac gcgt
 534

gaagagcccc gctgggagga ggaggaagag gagctcatgg gcatttcacc catatctcca
 720
 aaagaggcaa aggttctgt ggccaaaatt tctacattcc ctgaaggaga acctggcccc
 780
 cagagcccc gtgaagagaa tctggtgact tcagttgagc cccagcaga ggtgactcca
 840
 tcagagagca gtgagagcat ctccctcgtg acacagatcg ccaaccggc cactgcacct
 900
 gaggcacgag tgctacccaa ggacctgtcc caaaagctgc tagaggcatc cttggaggaa
 960
 cagggcctgg ctgtggatgt ggtgagact ggacctcac cccctattca ctccaagccc
 1020
 ctaacgctg ctggccacac cggcgccca gagcccaggc ctccagccag agtagagact
 1080
 ctgaggagg aggcgcccac agacttacgg gtgtttgagc tgaactcgga tagtgggaag
 1140
 tctacacct ccaacaatgg aaagaaaggc tcaagcacgg acatcagtga ggactgggag
 1200
 aaagactttg acttgacat gactgaagag gaggtgcaga tggcactttc caaagtggat
 1260
 gcctccgggg agctgaagat gtagaggggg aa
 1292

<210> 5470

<211> 427

<212> PRT

<213> Homo sapiens

<400> 5470

Xaa	Ala	Ala	Ala	Ser	Thr	Glu	Gly	Glu	Asp	Val	Gly	Trp	Trp	Arg	Ser
1				5					10					15	
Trp	Leu	Gln	Gln	Ser	Tyr	Gln	Ala	Val	Lys	Glu	Lys	Ser	Ser	Glu	Ala
		20						25					30		
Leu	Glu	Phe	Met	Lys	Arg	Asp	Leu	Thr	Glu	Phe	Thr	Gln	Val	Val	Gln
		35					40					45			
His	Asp	Thr	Ala	Cys	Thr	Ile	Ala	Ala	Thr	Ala	Ser	Val	Val	Lys	Glu
		50					55				60				
Lys	Leu	Ala	Thr	Glu	Gly	Ser	Ser	Gly	Ala	Thr	Glu	Lys	Met	Lys	Lys
		65			70				75					80	
Gly	Leu	Ser	Asp	Phe	Leu	Gly	Val	Ile	Ser	Asp	Thr	Phe	Ala	Pro	Ser
			85					90						95	
Pro	Asp	Lys	Thr	Ile	Asp	Cys	Asp	Val	Ile	Thr	Leu	Met	Gly	Thr	Pro
			100					105					110		
Ser	Gly	Thr	Ala	Glu	Pro	Tyr	Asp	Gly	Thr	Lys	Ala	Arg	Leu	Tyr	Ser
		115					120					125			
Leu	Gln	Ser	Asp	Pro	Ala	Thr	Tyr	Cys	Asn	Glu	Pro	Asp	Gly	Pro	Pro
		130					135					140			
Glu	Leu	Phe	Asp	Ala	Trp	Leu	Ser	Gln	Phe	Cys	Leu	Glu	Glu	Lys	Lys
		145			150				155					160	
Gly	Glu	Ile	Ser	Glu	Leu	Leu	Val	Gly	Ser	Pro	Ser	Ile	Arg	Ala	Leu
			165					170					175		
Tyr	Thr	Lys	Met	Val	Pro	Ala	Ala	Val	Ser	His	Ser	Glu	Phe	Trp	His
			180					185					190		
Arg	Tyr	Phe	Tyr	Lys	Val	His	Gln	Leu	Glu	Gln	Glu	Gln	Ala	Arg	Arg

```
<210> 5469
<211> 1292
<212> DNA
<213> Homo sapiens
```

4645

ggagagatga ctcagctgcc agtgatcaaa gcagagcctc tggagggtgaa ccagttcctc
 660
 aaagtgcacac cggaggacct ggtgcagatg cctccgacgc cccccagcag ccatggcagt
 720
 gacagcgacg gctcccagag tcccgcgtct ctgccccctt ccagccctgt caggcccatg
 780
 gcgcgctcct ccacggccat ctccagctcc ccactcctca cggctcctca taaattacag
 840
 gggacatcag gccctctggt cctgacagag gaggagaaga ggaccctgat tgctgagggc
 900
 tatcccatcc ccaccaaact cccctcacc aaatcagagg agaaggcctt gaagaaaatt
 960
 cggaggaaga tcaagaataa gatttctgct caggaaagta ggagaaagaa gaaagaatac
 1020
 atggacagcc tggagaaaaa agtggagtct tgttcaactg agaacttgga gcttcggaag
 1080
 aaggtagaga ccctggagaa tgccaacagc ttctccagcg ggatccagcc actcctctgt
 1140
 tccctgattg gcctggagaa tcccacctga cccccaccc caccctctg tctctggctg
 1200
 gggttccttt ctggcccaa gtaggtccaa gccctttag ttatttcgcc acctgctgta
 1260
 cattgtggga actgcaaccc ctacgtgcc gtttgggtgg agagagatta aacatttgcc
 1320
 caccaaaaa
 1329

<210> 5468

<211> 363

<212> PRT

<213> Homo sapiens

<400> 5468

Met	Asp	Ala	Val	Leu	Glu	Pro	Phe	Pro	Ala	Asp	Arg	Leu	Phe	Pro	Gly
1			5					10					15		
Ser	Ser	Phe	Leu	Asp	Leu	Gly	Asp	Leu	Asn	Glu	Ser	Asp	Phe	Leu	Asn
		20					25					30			
Asn	Ala	His	Phe	Pro	Glu	His	Leu	Asp	His	Phe	Thr	Glu	Asn	Met	Glu
		35					40					45			
Asp	Phe	Ser	Asn	Asp	Leu	Phe	Ser	Ser	Phe	Phe	Asp	Asp	Pro	Val	Leu
		50				55					60				
Asp	Glu	Lys	Ser	Pro	Leu	Leu	Asp	Met	Glu	Leu	Asp	Ser	Pro	Thr	Pro
65				70					75					80	
Gly	Ile	Gln	Ala	Glu	His	Ser	Tyr	Ser	Leu	Ser	Gly	Asp	Ser	Ala	Pro
		85						90					95		
Gln	Ser	Pro	Leu	Val	Pro	Ile	Lys	Met	Glu	Asp	Thr	Thr	Gln	Asp	Ala
		100						105					110		
Glu	His	Gly	Ala	Trp	Ala	Leu	Gly	His	Lys	Leu	Cys	Ser	Ile	Met	Val
		115					120					125			
Lys	Gln	Glu	Gln	Ser	Pro	Glu	Leu	Pro	Val	Asp	Pro	Leu	Ala	Ala	Pro
		130					135					140			
Ser	Ala	Met	Ala	Ala	Ala	Ala	Ala	Met	Ala	Thr	Thr	Pro	Leu	Leu	Gly
145					150				155					160	
Leu	Ser	Pro	Leu	Ser	Arg	Leu	Pro	Ile	Pro	His	Gln	Ala	Pro	Gly	Glu

gcagccacgc agtgcac
497

<210> 5466

<211> 134

<212> PRT

<213> Homo sapiens

<400> 5466

Met Ala Pro Pro Leu Gln Gly Pro Gly Gly Ala Ala Gly Gly Arg Thr
1 5 10 15
Asp Gly Gln Ala Ala Trp Val Ala Gly Pro Arg Lys Ala Gly Val Asp
20 25 30
Val Arg Asp Glu Pro Pro Ala Lys Pro Val Gly Met Ser Gly Pro Ser
35 40 45
Trp Trp Asp Cys Leu Gly His Arg His Gln His Gly Val Arg Ala Ile
50 55 60
Ser Gly Asp Ile Gly Gly Ala Thr Thr Arg Trp Gly Ile Phe Asn Arg
65 70 75 80
Leu Glu Pro Leu Arg Leu Glu Arg Pro Thr Pro Gly Arg Arg Pro Pro
85 90 95
Leu Thr Pro Leu Leu Pro Leu Leu Trp Asp Pro Pro Val Asp Thr Pro
100 105 110
Asp Glu Asp Thr Gln Glu Ala Ser Ser Gln Asp Arg Arg Gln Leu Pro
115 120 125
Gly Gln Pro Arg Ser Ala
130

<210> 5467

<211> 1329

<212> DNA

<213> Homo sapiens

<400> 5467

gtcgaatatc catgcagccg cgccgcccgc ctggagtgcg ggaagcccag tggaaggggg
60
tcccgggagc cggtctgcgat ggacgccgtc ttggaaccct tcccggccga caggctgttc
120
cccggatcca gcttcttgga cttgggggat ctgaacgagt cggacttcct caacaatgcg
180
cactttcctg agcacctgga ccactttacg gagaacatgg aggacttctc caatgacctg
240
ttcagcagct tctttgatga ccctgtgctg gatgagaaga gccctctatt ggacatggaa
300
ctggactccc ctacgccagg catccaggcg gagcacagct actccctgag cggcgactca
360
gcgccccaga gcccccttgt gcccatcaag atggaggaca ccaccaaga tgcagagcat
420
ggagcatggg cgctgggaca caaactgtgc tccatcatgg tgaagcagga gcagagcccc
480
gagctgcccg tggacctctt ggctgcccc tggccatgg ctgccgcggc cgccatggcc
540
accaccccgc tgctgggcct cagccccttg tccaggctgc ccatcccca ccaggccccg
600

gtgaagcagc gcttgcagat gtacaactcg cagcaccggt cagcaatcag ctgcatccgg
 600
 acggtgtgga ggaccgaggg gttggggggcc ttctaccgga gctacaccac gcagctgacc
 660
 atgaacatcc ccttccagtc catccacttc atcacctatg agttcctgca ggagcaggtc
 720
 aacccccacc ggacctacaa cccgcagtcc cacatcatct caggcggggt ggccggggcc
 780
 ctgcccgg cc
 792

<210> 5464
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 5464
 Phe Ser Gly Val Cys Phe Ala Gly Ile Ala Gly Ser Met Ala Thr Leu
 1 5 10 15
 Leu His Asp Ala Val Met Asn Pro Ala Glu Val Val Lys Gln Arg Leu
 20 25 30
 Gln Met Tyr Asn Ser Gln His Arg Ser Ala Ile Ser Cys Ile Arg Thr
 35 40 45
 Val Trp Arg Thr Glu Gly Leu Gly Ala Phe Tyr Arg Ser Tyr Thr Thr
 50 55 60
 Gln Leu Thr Met Asn Ile Pro Phe Gln Ser Ile His Phe Ile Thr Tyr
 65 70 75 80
 Glu Phe Leu Gln Glu Val Asn Pro His Arg Thr Tyr Asn Pro Gln
 85 90 95
 Ser His Ile Ile Ser Gly Gly Leu Ala Gly Ala Leu Ala Ala Ala
 100 105 110

<210> 5465
 <211> 497
 <212> DNA
 <213> Homo sapiens

<400> 5465
 tttgacggtc ttcaggttta tttcttaaat caattaggaa ataaaaccac agtgcccagg
 60
 aaagttcaca tgagacgcca cgggtgtctct tgccatggcc ccaccactcc agggggccagg
 120
 ggggtgctgct ggagggagga cagacggaca ggcggcctgg gtggccggcc ccagaaaggc
 180
 tggcgtggat gttcgagatg agccaccagc gaagccagta gggatgtctg ggccgtcctg
 240
 gtgggattgt ctgggacatc gccaccaaca cgggtgtcaga gccatcagtg gggacatcgg
 300
 agggggccacc accaggtggg gtatattcaa caggctagaa cccctgaggc ttgagaggcc
 360
 aacccccggc aggagacctc ccctgacccc tctgtgcct ctctgtggg accctccagt
 420
 agacacacca gatgaggaca cccaggaggc ctctccag gacaggaggc agctgcctgg
 480

tgattgattc acctaataata aatatatttg tgccatgaac ctctt
1725

<210> 5462

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5462

Met	Ser	Trp	Arg	Ile	Ser	Pro	Ala	Thr	Pro	Cys	Cys	Arg	Glu	Leu	Thr
1				5					10					15	
Phe	His	Leu	Cys	Ile	Phe	Cys	Leu	Glu	Thr	Ala	Tyr	Cys	Arg	Val	Gly
		20					25						30		
Leu	Gly	Ile	Cys	Tyr	Asp	Met	Arg	Phe	Ala	Glu	Leu	Ala	Gln	Ile	Tyr
	35					40						45			
Ala	Gln	Arg	Gly	Cys	Gln	Leu	Leu	Val	Tyr	Pro	Gly	Ala	Phe	Asn	Leu
	50				55						60				
Thr	Thr	Gly	Pro	Ala	His	Trp	Glu	Leu	Leu	Gln	Arg	Ser	Arg	Ala	Val
65				70						75				80	
Asp	Asn	Gln	Val	Tyr	Val	Ala	Thr	Ala	Ser	Pro	Ala	Arg	Asp	Asp	Lys
		85						90					95		
Ala	Ser	Tyr	Val	Ala	Trp	Gly	His	Ser	Thr	Val	Val	Asn	Pro	Trp	Gly
		100					105					110			
Glu	Val	Leu	Ala	Lys	Ala	Gly	Thr	Glu	Glu	Ala	Ile	Val	Tyr	Ser	Asp
	115					120						125			
Ile	Asp	Leu	Lys	Lys	Leu	Ala	Glu	Ile	Arg	Gln	Gln	Ile	Pro	Val	Phe
	130				135						140				
Arg	Gln	Lys	Arg	Ser	Asp	Leu	Tyr	Ala	Val	Glu	Met	Lys	Lys	Pro	
145					150					155					

<210> 5463

<211> 792

<212> DNA

<213> Homo sapiens

<400> 5463

nnnttttttt ttttttaaag cctggattgt aaccagattt tcttttttcc cctttctcag
60
ctgtagatat gatattctctt ttcagggccc cagcttaagg gcaaagtgag ttaatgtgta
120
gacaaaggcg agggacaaga gagagttaac atctagacag tggaaaaagc catggtgtgt
180
ggttttctggg aaccaccaac acttgcaggt ttagcttttt cccagggttg actacaagaa
240
agaaaacccat gtttttgcaa gattaaaatg tggttgagtg tgcctaaatt aaccatcccc
300
atttttatca tatttccacc atcacttcag ggttttaaga gtcagtgtct acctgggcgg
360
agctggtagt acattttgct tcttagaaag ctaagtcctg gggtccgtct gatttttaggt
420
tccaggaact tcttgagaac acccgatcgc agagggtaat tttctggaft ttgttttgca
480
gggtagctg ggagtatggc caccctgtct cagcatgcgg taatgaatcc agcagaagtg
540

catccagctt cagatttctt ccatcaaate agataacgtc actcgcgctt gtagcttcat
120
ccgggaggca gcaacgcaag gagccaaaat agtttctttg ccggaatgct ttaattctcc
180
atatggagcg aaatatcttc ctgaatatgc agagaaaatt cctggtgaat ccacacagaa
240
gctttctgaa gtagcaaagg aatgcagcat atatctcatt ggaggtaact tcctaccac
300
aaggctctat ccctgaagag gatgctggga aattatataa cacctgtgct gtgtttgggc
360
ctgatggaac ttactagca aagtatagaa agatccatct gtttgacatt gatgttctg
420
gaaaaattac atttcaagaa tctaaaacat tgagtccggg tgatagtctc tccacatttg
480
atactcgtat gtaccagata agtttgcttc tttagcaatc tcagtagaag acaatcaggt
540
atattttct tttttgtctc tctccgattt cttcacataa cctaactgaa agaccataag
600
tgagaaaggc agagaatcat cacagatctg gaaagttcgg gcttatttga gaactaagga
660
tttgacacga ttttgccctt tgatttgatt gtagcttctt gttacggctt ccagagtata
720
cctattaggc tacagttgag tacctcccat ctagataata agcattcaat tagaatgaat
780
ttctcatctt tactccgctg atgtaaatga tgtctttatg agatgaagtc caagtaggaa
840
tgagcttgta aattatctct gtcctcaggt cctgtgttaa tttatccctg tcagtgtttt
900
gtgatcatta tgtcatggag gatttccct gccacaccat gctgtaggga gtttaactttt
960
catttgtgca ttttctgttt ggaaacagct tactgcagag tgggtctggg catctgctac
1020
gacatgcggt ttgcagagct tgcacaaatc tacgcacaga gaggctgcca gctgttggtg
1080
tatccaggag cttttaatct gaccactgga ccagcccatt gggagtact tcagcgaagc
1140
cgggctgttg ataactcaggt gtatgtggcc acagcctctc ctgcccggga tgacaaagcc
1200
tcctatgttg cctggggaca cagcacctg gtgaacctt ggggggaggt tctagccaaa
1260
gctggcacag aagaagcaat cgtgtattca gacatagacc tgaagaagct ggctgaaata
1320
cgccagcaaa tccccgtttt tagacagaag cgatcagacc tctatgctgt ggagatgaaa
1380
aagccctaaa gtttatgttt ctaatgtgtc acagaatagg acgatatgat tctacaacat
1440
aatcaactcc ctattaaatt ctttaatgaa gattttttt ttaattcggc cttgtccttc
1500
ctaggttctc tattgagatg agaaagcctc attatgctga cattttccac gccacattaa
1560
atagttaaaa aggatgcagc ctggagccag agagcagaaa gctgggctgg ttctgaagct
1620
tcttccatac ttaagttgcc tccaagcagt ttgtgaaagt atcagatcct ggtatcctgg
1680

tggacagctt ctttgagact atttaaaaac tggatcaaca ggtctctaca acgccaagat
 1020
 ctaactaagc tttaaaaggt caagaagttt tatggctgac aaaggactcg cgcaacgcag
 1080
 aaggcctttc ccaccttaag cttccgggga tctgggaatt ttaccccat tctcttctgt
 1140
 ttgtctgagt ctcattcttc tgcaagcaag ggctgaaatc attttgtttg ggatagctgg
 1200
 gagtatggcc accctgctcc acgatgcggt aatgaatcca gcagaaggta atgtttcatg
 1260
 gtcccaggga ggggcagtag gggatgtgca aaggggcaca aaaaaatggt tgtgggagag
 1320
 tggagaggac tgaaggtggg cagacggctc ctagtctcca gtcagagcag acaggagaat
 1380
 tgaatttttt actacgttat caaaggcctc aagaaaggac gtgaacataa gagtttttgg
 1440
 tattcctgtg ctccgagcta cttcaaag
 1468

<210> 5460

<211> 155

<212> PRT

<213> Homo sapiens

<400> 5460

Met	Glu	Leu	Arg	Ser	Gly	Ser	Val	Gly	Ser	Gln	Ala	Val	Ala	Arg	Arg
1				5				10						15	
Met	Asp	Gly	Asp	Ser	Arg	Asp	Gly	Gly	Gly	Gly	Lys	Asp	Ala	Thr	Gly
			20					25					30		
Ser	Glu	Asp	Tyr	Glu	Asn	Leu	Pro	Thr	Ser	Ala	Ser	Val	Ser	Thr	His
		35				40						45			
Met	Thr	Ala	Gly	Ala	Met	Ala	Gly	Ile	Leu	Glu	His	Ser	Val	Met	Tyr
	50					55					60				
Pro	Val	Asp	Ser	Val	Lys	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro
65					70					75				80	
Lys	Ala	Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Gln
			85					90						95	
Thr	Glu	Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met
		100						105					110		
Gly	Ala	Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met
		115					120					125			
Lys	Arg	Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu
	130					135						140			
Ala	Asn	Gly	Ile	Leu	Lys	Ala	Phe	Val	Trp	Ser					
145					150					155					

<210> 5461

<211> 1725

<212> DNA

<213> Homo sapiens

<400> 5461

nnagtcgcg ccgcaggtgg tgcttgctc cagagtcacg acctctttcc gcttgccct
 60

<213> Homo sapiens

<400> 5458

```

Arg Ser Gly Ser Val Gly Ser Gln Ala Val Ala Arg Arg Met Asp Gly
 1             5             10             15
Asp Ser Arg Asp Gly Gly Gly Gly Lys Asp Ala Thr Gly Ser Glu Asp
      20             25             30
Tyr Glu Asn Leu Pro Thr Ser Ala Ser Val Ser Thr His Met Thr Ala
      35             40             45
Gly Ala Met Ala Gly Ile Leu Glu His Ser Val Met Tyr Pro Val Asp
      50             55             60
Ser Val Lys Val Met Trp Thr Val Glu Leu Cys Ala Gly His Phe Gln
65             70             75             80
Pro

```

<210> 5459

<211> 1468

<212> DNA

<213> Homo sapiens

<400> 5459

```

nncgccatgg cgtcaggcgc cgcggccccc gggaggtggc tcccacttta agaagtgaag
60
ttttgcgccc ctccccctcc ctgccacact cctgcagcct cctgcgcccc gccgagctgg
120
cggatggagc tgcgcagcgg gagcgtgggc agccaggcgg tggcgcgag gatggatggg
180
gacagccgag atggcggcgg cggcaaggac gccaccgggt cggaggacta cgagaacctg
240
ccgactagcg cctcctgtgc caccacatg acagcaggag cgatggccgg gatcctggag
300
cactcgggtca tgtaccgggt ggactcgggt aagacacgaa tgcagagttt gagtccagat
360
cccaaagccc agtacacaag tatctacgga gccctcaaga aaatcatgca gaccgaaggc
420
ttctggaggc ccttgcgagg cgtcaacgtc atgatcatgg gtgcagggcc agcccatgcc
480
atgtattttg cctgctatga aaacatgaaa aggactttta atgacgtttt ccaccaccaa
540
ggaaacagcc acctagccaa cgggtattttg aaagcgtttg tctggagtta gaaagttctc
600
ttcttcaaca cgtccctccc cagggtgttc ctccctgtga ccagccgcc tcgacttcgg
660
cccgcttgct cacgaataaa gaactcagag ttgtgtgtgc aatgcacacc cagacacacg
720
cacgcacaca cagcgcgcg cacacacatg cttttttctg tccccctccg ctttctgaag
780
cctggggaga aatcagtgac agaggtgttt tggttttatt gttatgtggg ttttcttttg
840
tatttttttt gtttgttttg tttttaaaca ttcaaaagca attaatgatc agacatagga
900
gaaacctga atagaacaa aacttttgaa tgctggattc aaaaaaaaaa aaaagttatc
960

```

<210> 5456
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 5456
 Pro Arg Thr Ala Gly Ser Trp Pro Ser Ala Ala Ala Gln Thr Arg Ala
 1 5 10 15
 Val Cys Ala Gly Ser Arg Leu Phe Pro Val Ser Asn Trp Leu Val Ser
 20 25 30
 Leu Tyr Gly Leu Ala Ser Phe Arg Pro Gly Val Gly Pro His Pro Thr
 35 40 45
 His Cys Pro Leu Ala Val Arg Leu Ala Cys Pro Ala Val Pro Thr Thr
 50 55 60
 Val Val Lys Gln Arg Leu Gln Met Tyr Asn Ser Gln His Arg Ser Ala
 65 70 75 80
 Ile Ser Cys Ile Arg Thr Val Trp Arg Thr Glu Gly Leu Gly Ala Phe
 85 90 95
 Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Ile Pro Phe Gln Ser
 100 105 110
 Ile His Phe Ile Thr Tyr Glu Phe Leu Gln Glu Gln Val Asn Pro His
 115 120 125
 Arg Thr Tyr Asn Pro Gln Ser His Ile Ile Ser Gly Gly Leu Ala Gly
 130 135 140
 Ala Leu Ala Ala Ala
 145

<210> 5457
 <211> 448
 <212> DNA
 <213> Homo sapiens

<400> 5457
 cgcagcggga gcgtgggcag ccaggcgggtg gcgcggagga tggatgggga cagccgagat
 60
 ggcgggcggc gcaaggacgc caccgggtcg gaggactacg agaacctgcc gactagcgcc
 120
 tccgtgtcca cccacatgac agcaggagcg atggccggga tcttgagca ctcggtcatg
 180
 taccgggtgg actcggtgaa ggtaatgtgg actgtggagc tctgtgctgg tcactttcaa
 240
 cctgaacct gatgctactt atttgcagt tctaagtga aagtcggcct ggtggatgct
 300
 tccattata atattaaatt tgcttcttcg tgaggtcaca cctcacatcc ccagtgtcac
 360
 ttttaataact agtgtttttt acatgggtggg ccatgaccca ttagtggact ctgcatttaa
 420
 aaataaataa ataaataaaa gaaaaaaaa
 448

<210> 5458
 <211> 81
 <212> PRT

210		215		220
Thr Asp Thr Glu Cys Val	Glu Val Cys Thr Pro Asp Pro Phe Leu Pro			
225		230	235	240
Ser Leu Asp Ala Cys Trp	Ser Pro His Thr Leu Leu Gln Ser Leu Asp			
	245	250	255	
Gln Leu Val Gln Ala Leu Arg	Ala Thr Pro Asp Pro Asp Pro Glu Asp			
	260	265	270	
Arg Gly Pro Arg Pro Gly Ser	Pro Ser Ala Leu Leu Pro Gly Pro Gly			
	275	280	285	
Arg Pro Pro Pro Pro Pro Thr	Lys Pro Pro Glu Thr Glu Ala Gln Arg			
	290	295	300	
Gly Pro Cys Leu Gln Trp Leu	Ser Glu Trp Thr Leu Glu Pro Asp Ser			
305	310	315	320	

<210> 5455

<211> 975

<212> DNA

<213> Homo sapiens

<400> 5455

```

nggtgaggct caaactctct ctttctcctt gtcataacta ttggtttaca gtctttattt
60
gtttaaaagt aaagcacatt gtatgtattt atttggaat acatgaggcc attaaaaccc
120
tgagcctaag gtaccacagt tagtctcatt tgcctcttgt cctgtgaact ccacttagaa
180
tgtcattgaa cttgggcaga cataattcta gtgtctgttc caaacgcact gtgtcacaga
240
agctagaatt accattagag gcacaaaccc ctgagaatac acaagggggc acgcttccag
300
tagatgtgtt ggggaaggag gagggcagag gggacagggg acaggattca gctttgtggt
360
gggtcctgag ggttcttacc aggggtagcc aggatctggg aaacagatca gcgactctag
420
tctgaagtgg ctgcctgggt cgggggctgc cttcagcaag attcaggcag gagagacgga
480
aatagccacc ttccaggcgt gagtcttgga gataaaaatg gattttaacc taggactgcc
540
gggagctggc cctccgcggc tgctcagact agggctgtgt gtgctggctc tcgcctgttt
600
ccggtgtcta actggcttgt ttctctttat ggcttggtt cattccgacc tggggtgggg
660
ccacatccaa cccactgcc actggctgtc cgtctggcct gccccgcggt tccaaccaca
720
gtggtgaagc agcgcttgca gatgtacaac tcgcagcacc ggtcagcaat cagctgcatc
780
cggaagggtg ggaggacga ggggttgggg gccttctacc ggagctacac cagcagctg
840
accatgaaca tccccctcca gtccatccac ttcacacct atgagttcct gcaggagcag
900
gtcaaccccc accggacct caaccgcag tccacatca tctcaggcgg gctggccggg
960
gccctcgccg cggcg
975

```

ggtgagctac tgcccccaac ctaccctcta gaggggctgg gaagggccgt tctgggctca
 1440
 cctggcctgg gagaccatc tggctcctgc gtcctctgcc cctcactgct ctgtgcagat
 1500
 cctgtcgccc tcagctgcct cctcccgaga cctaattggc cctgctgggc tcgagtctgc
 1560
 agggccggct gegtgtgcct tggcctcact gtaccagtgg ttccctctct gcccgattc
 1620
 tgagctcagt gtggtgtttg gtgcacaggg gttggtcagg ggccatggcc aaggccctgc
 1680
 caccgacgcc catccctcag atccactgtg agcaccaacc tgctgcagtc tcttgggccc
 1740
 ctgctggcag ctctgccacg tcaccgcctg cctggctccc acacagccat gcattgtcac
 1800
 tctgcctccg ggaccccagc ttgggagctg tgggtctgcc aggtcccacc tcctctgtcc
 1860
 cccatgccac aacctgggct cctggctaca gcagggtccc agggactcca aataaatgtt
 1920
 cagtgactgg caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1974

<210> 5454

<211> 320

<212> PRT

<213> Homo sapiens

<400> 5454

Xaa	Gly	Arg	Pro	Ala	Met	Glu	Pro	Gly	Ser	Val	Glu	Asn	Leu	Ser	Ile
1				5					10					15	
Val	Tyr	Arg	Ser	Arg	Asp	Phe	Leu	Val	Val	Asn	Lys	His	Trp	Asp	Val
			20					25					30		
Arg	Ile	Asp	Ser	Lys	Ala	Trp	Arg	Glu	Thr	Leu	Thr	Leu	Gln	Lys	Gln
	35						40					45			
Leu	Arg	Tyr	Arg	Phe	Pro	Glu	Leu	Ala	Asp	Pro	Asp	Thr	Cys	Tyr	Gly
50				55						60					
Phe	Arg	Phe	Cys	His	Gln	Leu	Asp	Phe	Ser	Thr	Ser	Gly	Ala	Leu	Cys
65				70					75					80	
Val	Ala	Leu	Asn	Lys	Ala	Ala	Ala	Gly	Ser	Ala	Tyr	Arg	Cys	Phe	Lys
			85					90					95		
Glu	Arg	Arg	Val	Thr	Lys	Ala	Tyr	Leu	Ala	Leu	Leu	Arg	Gly	His	Ile
			100					105					110		
Gln	Glu	Ser	Arg	Val	Thr	Ile	Ser	His	Ala	Ile	Gly	Arg	Asn	Ser	Thr
		115					120					125			
Glu	Gly	Arg	Ala	His	Thr	Met	Cys	Ile	Glu	Gly	Ser	Gln	Gly	Val	Ala
130						135					140				
Gly	Cys	Glu	Asn	Pro	Lys	Pro	Ser	Leu	Thr	Asp	Leu	Val	Val	Leu	Glu
145					150					155				160	
His	Gly	Leu	Tyr	Ala	Gly	Asp	Pro	Val	Ser	Lys	Val	Leu	Leu	Lys	Pro
			165					170					175		
Leu	Thr	Gly	Arg	Thr	His	Gln	Leu	Arg	Val	His	Cys	Ser	Ala	Leu	Gly
			180					185					190		
His	Pro	Val	Val	Gly	Asp	Leu	Thr	Gly	Glu	Val	Ser	Gly	Arg	Glu	
		195					200				205				
Asp	Arg	Pro	Phe	Arg	Met	Met	Leu	His	Ala	Phe	Tyr	Leu	Arg	Ile	Pro

195

200

205

<210> 5453

<211> 1974

<212> DNA

<213> Homo sapiens

<400> 5453

ntccggcaggc cggccatgga gccaggcagc gtggagaacc tgtccatcgt gtaccggagc
 60
 cgcgacttcc tgggtgtcaa caagcactgg gacgttcgca ttgacagcaa ggcgtggcgg
 120
 gagactctga ccttgcagaa gcagctgcgg taccgctttc ccgagctggc cgaccctgac
 180
 acctgctacg gggttcaggtt ctgccaccag ctggatttct ccaccagcgg ggcgctgtgc
 240
 gtggccctaa acaaggcagc cgccggcagc gcgtacaggt gcttcaagga gcggcgcggtg
 300
 accaaggctt acctggcatt gctgcggggg cacatccagg agagccgggt aaccatcagc
 360
 catgccattg gcaggaacag cacggagggc cggggccaca ccattgtgat cgagggctcg
 420
 caggggtgtg caggttgtga gaacccaaag ccaagcctca cagatctcgt ggttctggaa
 480
 cacgggctgt acgcaggcga tctgtctctc aaagtgtctc tgaagccgct cacgggcccgg
 540
 acacaccagc tgcgcgtgca ctgcagtgcc ctgggccacc ccgtggtggg cgacctgacc
 600
 tacggagaag tctcgggccg ggaggaccgg ccgttcagaa tgatgctgca cgctttctac
 660
 ctgcgcattc ccacggacac cgagtgtgtg gaggtctgca cgctgaccc ctctctgccc
 720
 tccctggatg cctgctggag ccccccacaca ctgctgcagt cgctggacca gctcgtgcag
 780
 gccttacggg ccacccccga ccctgacccc gaggataggg gcccagggc aggcagcccc
 840
 tccgactcc tgctggggc cggccggcct cctccacccc caaccaagcc ccctgagact
 900
 gaggcacagc gggggccctg cctgcagtgg ctgtcggagt ggacgctgga accggacagc
 960
 tgagagccgt ggggctgggg caggggggtgt cagctgcaca gcgggactct agggagatgg
 1020
 gcgagcgagc gtctgtcac tggctctggg gcctcgaggt gccaggcagc atcaggccca
 1080
 ctgggttgcc ccggccaggc ctgcgaggaa gggctgaggt ggggcccggc gggggcgcca
 1140
 ggcagccgtg atcacaggtg acgaccgcac cgcggccgtg ggactgatgc gggatcccga
 1200
 gggccttctt gccacatgc cccgggagaa accgaggccc ctccctctc ctggaacagc
 1260
 ttccggctct caagcgtcac cccaggggcg tcagttttac ggactcaagg tcacctcagg
 1320
 aagaggcagg gccaggtttt gggataggct ttgcctccag gatgggctgc tctgggcct
 1380

gccctgagaa aaggcagcca cctcctctcc ctggctgaac ccctgccacc ctactcctca
 600
 ccagaattgt cagtggcctt tcaccacagt ggtccttctt gcctgagccc tgcactgtcc
 660
 cagaccacac agaagtcttg tcacctctgg gcgcctggga tggtcaccga agagaagcac
 720
 gctgtccccg tctctcctgg cttctgccag aaaatcgaac aagtgcatt aacacactgt
 780
 tactgccgaa gctgaaact ccaggactt gtccttgatc cttccagaaa ccaccaggtc
 840
 cggcacttgg agccccccgg agagggacct ccagccgag ccctcaaaga actccatgaa
 900
 atcaggaact gcttgatgaa atgtatctcc ttgtacctgg aagatgaagc ccaaaccacc
 960
 acacctctgt ctccccagg gctcgggatg tctccagcag cccggccacg cagcttccca
 1020
 ggtgggctcg gggagggtgg agcagggacc atctctgtcc cctccaccct cactccatcc
 1080
 acctcggaga ccacctccc ccagccagat acggaataaa actacagacg cagacgtcgg
 1140
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1184

<210> 5452

<211> 206

<212> PRT

<213> Homo sapiens

<400> 5452

Met	Ser	Ser	Val	Tyr	Pro	Arg	Pro	Leu	Glu	Gly	Glu	Ser	Arg	Ala	Leu
1			5					10						15	
Arg	Lys	Gly	Ser	His	Leu	Leu	Ser	Leu	Ala	Glu	Pro	Leu	Pro	Pro	Tyr
			20					25					30		
Ser	Ser	Pro	Glu	Leu	Ser	Val	Ala	Phe	His	His	Ser	Gly	Pro	Ser	Cys
			35				40					45			
Leu	Ser	Pro	Ala	Leu	Ser	Gln	Thr	Thr	Gln	Lys	Ser	Gly	His	Leu	Trp
			50				55					60			
Ala	Pro	Gly	Met	Val	Thr	Glu	Glu	Lys	His	Ala	Val	Pro	Val	Ser	Pro
65						70				75				80	
Gly	Phe	Cys	Gln	Lys	Ile	Glu	Gln	Val	Gln	Leu	Thr	His	Cys	Tyr	Cys
			85					90					95		
Arg	Ser	Leu	Lys	Leu	Pro	Gly	Leu	Val	Leu	Asp	Pro	Ser	Arg	Asn	His
			100					105					110		
Gln	Val	Arg	His	Leu	Glu	Pro	Pro	Gly	Glu	Gly	Pro	Pro	Ser	Arg	Ala
			115					120					125		
Leu	Lys	Glu	Leu	His	Glu	Ile	Arg	Asn	Cys	Leu	Met	Lys	Cys	Ile	Ser
			130				135					140			
Leu	Tyr	Leu	Glu	Asp	Glu	Ala	Gln	Thr	Pro	Thr	Pro	Leu	Ser	Pro	Pro
145						150				155				160	
Gly	Leu	Gly	Met	Ser	Pro	Ala	Ala	Arg	Pro	Arg	Ser	Phe	Pro	Gly	Gly
			165					170					175		
Leu	Gly	Glu	Val	Gly	Ala	Gly	Thr	Ile	Ser	Val	Pro	Ser	Thr	Leu	Thr
			180					185					190		
Pro	Ser	Thr	Ser	Glu	Thr	Thr	Leu	Pro	Gln	Pro	Asp	Thr	Glu		

```

65          70          75          80
Ala Ala Phe Leu Phe Thr Val Cys His Val Gly Ile Xaa Val Gln Asp
          85          90          95
Trp Phe Thr Asp Leu Ser Leu Tyr Arg Phe Leu Gln Thr Ala Glu Met
          100          105          110
Val Lys Pro Ser Thr Pro Ser Pro Ser His Glu Ser Ser Ser Ser
          115          120          125
Gly Ser Asp Glu Gly Thr Glu Tyr Tyr Pro His Leu Val Phe Phe Gln
          130          135          140
Asn Lys Ala Arg Arg Glu Asp Phe Cys Pro Arg Lys Leu Arg Gln Met
145          150          155          160
His Leu Met Ile Asp Gln Leu Met Ala His Ser His Leu Arg Tyr Lys
          165          170          175
Gly Thr Leu Ser Met Leu Gln Cys Asn Val Phe Pro Gly Leu Pro Pro
          180          185          190
Asp Phe Leu Asp Ser Glu Val Asn Leu Phe Leu Val Pro Phe Met Asp
          195          200          205
Ser Glu Ala Glu Ser Glu Asn Pro Pro Arg Ala Gly Pro Gly Ser Ser
          210          215          220
Pro Leu Phe Ser Leu Leu Pro Gly Tyr Arg Gly His Pro Ser Phe Gln
225          230          235          240
Ser Leu Val Ser Lys Leu Arg Ser Gln Val Met Ser Met Ala Arg Pro
          245          250          255
Gln Leu Ser His Thr Ile Leu Thr Glu Lys Asn Trp Phe His Tyr Ala
          260          265          270
Ala Arg Ile Trp Asp Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr
          275          280          285
Ser Arg Leu Leu Ala
          290

```

<210> 5451

<211> 1184

<212> DNA

<213> Homo sapiens

<400> 5451

```

ncacgcctgg ctaaattttg tatttttggg agagacgggg ttccacgtgt tggccaggct
60
gggtctgaac tgctgacctc aagtgatctg tccgcctcag cctcccaaag tgctgggatt
120
acagatgtga gccatcatgc ccggctaatt tttttgtatt ttagtagaga cagggtttca
180
ccgtgttagc caggatgggc ttgatctcct gaccttgtga tccaccagcc tcagcctccc
240
aaagtgcctg gattacaggc gtgagccact gtgcccggcc aagaattttt ttatcgataa
300
catagtgagc tctctgcctc ttcggaacga tgtccacttt gcttatgata aaccaagca
360
ggactcttct ctccctggac gcctctcccc tggctctggaa tcttccagtt ctgccagaat
420
tggcctttcc cagatgctgc aaacttccag ttgaaccctt ttttctgtgt ggccccctggg
480
gctgcgagac caaaatccat gagttctgtg taccctagac ctttgaagg tgagagcagg
540

```

gctgccttcc ttttcacggt ctgccatgtg gggattnntg tccaggactg gttcacagac
 300
 ctcagtctct acaggttcct gcagacagca gagatggtga agccctccac cccatcccc
 360
 agccacgagt ccagcagctc atcggtctcc gatgaaggca ccgagtacta cccccaccta
 420
 gtcttcttcc agaacaaagc tcgccgagag gacttctgtc ctcggaagct gcggcagatg
 480
 cacctgatga ttgaccagct catggccac tccacctgc gttacaaggg aactctgtcc
 540
 atgttacaat gcaatgtctt cccggggctt ccacctgact tcctggactc tgaggtaaac
 600
 ttattcctgg tacccttcat ggacagtga gacagagtg aaaaccacc aagagcagga
 660
 cctgggtcca gccactctt ctccctgctg cctgggtatc gtggccacc cagtttccag
 720
 tccttggtga gcaagctccg gagccaagt atgtccatgg cccggccaca gctgtcacac
 780
 acgacctca ccgagaagaa ctggttccac tacgtgccc ggatctggga tggggtgaga
 840
 aagtcctctg ctctggcaga gtacagccgc ctgctggcct gaggccaagg agaggaatgt
 900
 catgcagggg acctcctggg tccgcagtgt actgcagggg agcacagatg tccatcccc
 960
 gctggggtgg agagcggcag caggcctgat ggatgaggga tcgtggcttc ccggcccaga
 1020
 gacatgaggt gtccagggcc agggccccc cctcagttg gggctgttcc gggggtgact
 1080
 gtgagcgtc ccaccccaaa cctgagatgg ggcagcccgt cctgtgtcct ccacagggac
 1140
 aagcagtgga aggagtctga atggtcacca ggaagcccg gctccatctt gacctccttt
 1200
 ttcagggaca ggagcaacag gccctcttcc cctgactcta agcccttccc tgtaaggatga
 1260
 ggcaggggtc ggagagctct ttattggaac agatctggtg gttcaaataa acacagtcac
 1320
 gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1359

<210> 5450

<211> 293

<212> PRT

<213> Homo sapiens

<400> 5450

Ser	Pro	Glu	Glu	Asp	Gln	Arg	Thr	Tyr	Val	Phe	Arg	Ala	Gln	Ser	Ala
1				5					10					15	
Glu	Met	Lys	Glu	Arg	Gly	Gly	Asn	Gln	Thr	Ser	Gly	Ile	Asp	Phe	Phe
			20				25					30			
Ile	Thr	Gln	Glu	Arg	Ile	Val	Phe	Leu	Asp	Thr	Gln	Pro	Ile	Leu	Ser
		35				40					45				
Pro	Ser	Ile	Leu	Asp	His	Leu	Ile	Asn	Asn	Asp	Arg	Lys	Leu	Pro	Pro
	50					55				60					
Glu	Tyr	Asn	Leu	Pro	His	Thr	Tyr	Val	Glu	Met	Gln	Ser	Leu	Gln	Ile

aacatcaagc cttgggattc ttggagcaag cagaaagcca gtaacttcgc tctgttagag
 1320
 gtggaggatt ttccataggt tccccccatt tccatgattg tatttttaga tggattaaat
 1380
 agtctcctgt ttttaaacca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1440
 aaaa
 1444

<210> 5448
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 5448
 Gly Ile Asp Asp Leu Ile Val Val Leu Cys Ser Lys Lys Thr Phe Gln
 1 5 10 15
 Ile Thr Lys Gln Gly Asp Gly Val Asp Phe Leu Ser Trp Phe Leu Asn
 20 25 30
 Ala Leu His Ser Ala Leu Gly Gly Thr Lys Lys Lys Lys Lys Thr Ile
 35 40 45
 Val Thr Asp Val Phe Gln Gly Ser Met Arg Ile Phe Thr Lys Lys Leu
 50 55 60
 Pro His Pro Asp Leu Pro Ala Glu Glu Lys Glu Gln Leu Leu His Asn
 65 70 75 80
 Asp Glu Tyr Gln Glu Thr Met Val Glu Ser Thr Phe Met Tyr Leu Thr
 85 90 95
 Leu Asp Leu Pro Thr Ala Pro Leu Tyr Lys Asp Glu Lys Glu Gln Leu
 100 105 110
 Ile Ile Pro Gln Val Pro Leu Phe Asn Ile Leu Ala Lys Phe Asn Gly
 115 120 125
 Ile Thr Glu Lys Glu Tyr Lys Thr Tyr Lys Glu Asn Phe Leu Lys Arg
 130 135 140
 Phe Gln Leu Thr Lys Leu Pro Pro Tyr Leu Ile Phe Cys Ile Lys Arg
 145 150 155 160
 Phe Thr Lys Asn Asn Phe Phe Val Glu Lys Asn Pro Thr Xaa Cys Gln
 165 170 175
 Phe Pro Tyr Tyr Lys Cys Gly Ser Glu Arg Ile Leu Val
 180 185

<210> 5449
 <211> 1359
 <212> DNA
 <213> Homo sapiens

<400> 5449
 tctccagagg aggaccagag gacttatggt ttccgggccc agagcgctga aatgaaggaa
 60
 cgaggggggca accagaccag tggcatcgac ttctttatta cccaagaacg gattgttttc
 120
 ctggacacac agcccatcct gagcccttct atcctagacc atctcatcaa taatgaccgc
 180
 aaactgcctc cagagtacaa ccttccccac acttacgttg aaatgcagtc actccagatt
 240

65		70		75		80									
His	Ala	Asp	Ser	Asp	Met	Arg	Ala	His	Ser	Leu	Ser	His	Asp	Ser	Gln
				85					90					95	
Thr	Val	Glu	Thr	Arg	Gln	Val	Gly	Leu	Gly	Cys					
				100				105							

<210> 5447

<211> 1444

<212> DNA

<213> Homo sapiens

<400> 5447

```

nngcaggtaa gtggtaccat catatgcccg ggacaatttg gcttgcttgt ccaagtttgc
60
aatttgctgc tttgtgaaag tgggcttcaa cacatacgtg atatcctcca atgaggaatc
120
gatgatctca tagttgtact ttgcagtaag aagacttttc agatcaccaa acaaggagat
180
ggcgttgact ttctgtcttg gtttctgaat gctctgcact cagctctggg gggcacaaag
240
aagaaaaaga agactattgt gactgatgtt ttccaggggt ccatgaggat cttcactaaa
300
aagcttcccc atcctgatct gccagcagaa gaaaaagagc agttgctcca taatgacgag
360
taccaggaga caatgggtgga gtccactttt atgtacctga cgctggacct tctactgcc
420
cccctctaca aggacgagaa ggagcagctc atcattcccc aagtgccact cttcaacatc
480
ctggctaagt tcaatggcat cactgagaag gaatataaga cttacaagga gaactttctg
540
aagcgcttcc agcttaccaa gttgcctcca tatctaactt tttgtatcaa gagattcact
600
aagaacaact tctttgttga gaagaatcca actnattgtc aatttcccta ttacaaatgt
660
ggatctgaga gaatacttgt ctgaagaagt acaagcagta cacaagaata ccacctatga
720
cctcattgcc aacatcgtgc atgacggcaa gccctccgag ggctcctacc ggatccacgt
780
gcttcatcat gggacaggca aatggtatga attacaagac ctccagggtga ctgacatcct
840
tcccagatg atcacactgt cagaggctta cattcagatt tggaagaggc gagataatga
900
tgaaaccaac cagcaggggg cttgaaggag gcgtctaggg ctttgctccc aagggtgtg
960
gctgatgatg gtaaataaga acacagaagc thtagctgaa cacaggctgg ctggtgggct
1020
tcctaggcca gccagcttg tatgggttct ggctacacca gagcaccaag agcccacttg
1080
cctgggatgg cccacactg tcaactcagct gttctttgat catttttttc tagattgatg
1140
ctcctttctc ccatgcattg agctcccatc tagcttcagc agggcagaac cttctctcag
1200
atgtgtgtaa cttatgtctt gagtatctgg gagtagttga agaacagata attccttcca
1260

```

agaaaaggcg ggggtcggac tgacgccgtc ctggggccatg tccacgtctg ggggtctgcag
 120
 gttccatctc cttttccact gtgcctaacc ttacatctat tacctacatc cagcaagaca
 180
 cgattttcca cgatgagttg attcgtaatt ccatttatgt gctagttttt agaattttcc
 240
 tgtgggtttt tttttactta cttatgattt taattttgtt tgctttaaaa aaaacacatg
 300
 cataggaaag aatgcttctt ttcatttcaa ttaaaaacaa caaattgctt ttttttaagc
 360
 aaaaattcat tgaggggggg gctcgcgttg tacaagaaa atcagacca cgggatggc
 420
 tgtgatcaaa gagacagtaa caagggtagg gaggtggaga tgcgaaatcca aacacacaac
 480
 ttgtgcaaag gtcaagtggc cacagccgcc acggaaaaca ggctggcggg tcctccgacg
 540
 ttcaacacac agtcgccacg ggacacagtg gttccacccc cagggtgtgca gcaatagaca
 600
 tcacagccca cgtccgcacg cagactcgga cacgcgtgct cacagcccac gttcgcacgc
 660
 agactcagac atgcgtgctc acagcctcag tcatgacagc cagacagtgg aaacaaggca
 720
 ggtgggcctc ggctgctgag ggagcaacag cagaacggtg ctcagccctg gagaggaagg
 780
 acgcctggac cctggcccca caccacagca tccacaatgt ggtgcccaacc aacaggccac
 840
 gcacacagag gccatggggc agacgttcc actgacacga aatgcccaag agaggcacag
 900
 ccggcgacag aacggggacc cgtgtctgcc gcccaggag aggctgcagg ccggaaactg
 960
 gaggattaca gggcgcgagt gtcgttttag ggagatgaaa atgtttctaaa attggctgtg
 1020
 gcaattgttg cacaactctg caaatatact aaaaaccact gaattgtaca tttcaaatg
 1080
 ggtgaattgt acggtgcttg tattatacct caataaagct atttttaag aaacaaaatt
 1140
 ttaatacgt aaaaaaatca gaaagtgaaa tctggaatta acattcc
 1187

<210> 5446

<211> 107

<212> PRT

<213> Homo sapiens

<400> 5446

Met	Ala	Val	Ile	Lys	Glu	Thr	Val	Thr	Arg	Val	Gly	Arg	Trp	Arg	Cys
1				5					10					15	
Glu	Ser	Lys	His	Thr	Thr	Cys	Ala	Lys	Val	Lys	Trp	Pro	Gln	Pro	Pro
			20						25				30		
Arg	Lys	Thr	Gly	Trp	Arg	Phe	Leu	Arg	Arg	Ser	Thr	His	Ser	Arg	His
		35					40					45			
Gly	Thr	Gln	Trp	Phe	His	Pro	Gln	Val	Cys	Ser	Asn	Arg	His	His	Ser
	50					55					60				
Pro	Arg	Pro	His	Ala	Asp	Ser	Asp	Thr	Arg	Ala	His	Ser	Pro	Arg	Ser

4627

gtctgggāca tgttcttctg tgaaggggtc aagatcatct tccgggtggg gctgggtgctg
 1020
 ctgaagcacg cgctggggtc cctgagaag gtcaaagcct gccagggcca gtacgagacc
 1080
 atcgagcgac tgcggagcct cagccccaag atcatgcagg aggcctttct ggtccaggag
 1140
 gtgggtggagt tgcccgtagc agagcgccag attgagcgcg aacacctcat tcagctgagg
 1200
 cgctggcagg agaccggggg tgagctgcag tgccgctccc cgcccaggct gcatgggtgcc
 1260
 aaggctatct tggatgcaga acctgggtccc cggcctgccc tacaaccttc accatccatc
 1320
 cgctgcccc tagatgcccc cctccctggc tccaaagcca agcccaagcc acccaagcag
 1380
 gcccagaagg agcagcggaa acagatgaag gggagagggc agctggagaa gccccagcc
 1440
 ccaaatcaag ccatggtggt ggccgctgca ggagatgcat gtccccaca gcatgtgccc
 1500
 ccgaaggact cagcccccaa ggactcagcc cctcaggatt tggtcccca ggtctcagcc
 1560
 caccaccgct cccaggagag cttgacgtcc caagagagtg aggacacctt cttgtaacct
 1620
 tggcagctaa ggctccagg gcgggggtct catataacta cacggttcat gaactgacat
 1680
 tccacatcct gccaccctc tgagggccaa gctgcctggc cactgggctg ggctggagtc
 1740
 tggctggtcc aacacagatt ctgcctggtc caacacagat tctgcctgag cctccttatt
 1800
 tattttcttt acagtggcac tcaggctggc ccagccaggg caggcagaag ctaggggctg
 1860
 ggggggtggg cctccttcag cccctcctc ctgggggatg ctccccaggg ttaggggtgct
 1920
 ggtgtgaggg gaaaggggtg ggtgttcttt gtgtaaaata gaaacatggt tttgtacaga
 1980
 aataaacagc cttgtataga gaaaaaaaa aaaaaaaaa a
 2021

<210> 5444

<211> 438

<212> PRT

<213> Homo sapiens

<400> 5444

Leu Glu Glu Val Pro Leu Glu Val Leu Arg Gln Arg Glu Ser Lys Trp
 1 5 10 15
 Leu Asp Met Leu Asn Asn Trp Asp Lys Trp Met Ala Lys Lys His Lys
 20 25 30
 Lys Ile Arg Leu Arg Cys Gln Lys Gly Ile Pro Pro Ser Leu Arg Gly
 35 40 45
 Arg Ala Trp Gln Tyr Leu Ser Gly Gly Lys Val Lys Leu Gln Gln Asn
 50 55 60
 Pro Gly Lys Phe Asp Glu Leu Asp Met Ser Pro Gly Asp Pro Lys Trp
 65 70 75 80
 Leu Asp Val Ile Glu Arg Asp Leu His Arg Gln Phe Pro Phe His Glu

130	135	140
Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile Lys Gln		
145	150	155
Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Arg Leu Arg Phe		160
	165	170
Ile Leu Pro Val Asn Glu Gly Lys Lys Leu Lys Glu Lys Leu Lys Pro		175
	180	185
Leu Ile Lys Val Ile Glu Ser Glu Asp Tyr Gly Gln Gln Leu Glu Ile		190
	195	200
Val Cys Leu Ile Asp Pro Gly Cys Phe Arg Glu Ile Asp Glu Leu Ile		205
	210	215
Lys Lys Glu Thr Lys Gly Lys Gly Ser Leu Glu Val Leu Asn Leu Lys		220
225	230	235
Asp Val Glu Glu Gly Asp Glu Lys Phe Glu		240
	245	250

<210> 5443

<211> 2021

<212> DNA

<213> Homo sapiens

<400> 5443

cagatgcaga cactcactca gcctctgcct cagagaggta ccatgggtcc tggccacatt
60
agggaagtag gcacttgaac cacctgctgt ctctctagct tatgccttga ggcggtggat
120
ggggaggtgg cgtgttcct ctcacttgca ataggatggt ccgaggtagc agtcctgaag
180
ggaacagcag ggatggtagg caggaagaat ggaggtctga ccaggctggc ggctgggaat
240
gaagccaggg cctttgcttc ccttggcacc tctcacaggc cctgccctct gctccacagg
300
ctggaggaag tccccctgga ggtgctgagg cagagggagt ccaagtggct ggacatgctc
360
aacaactggg acaaatggat ggccaagaag cacaaaaaga ttcgtctgcg gtgccaaaag
420
ggcatcccgc cttctctgcg gggccgtgct tggcagtacc tgtcaggagg caaggtgaag
480
ttacagcaga accctggaaa gtttgacgag ctggacatgt cccctgggga cccaagtgg
540
ctggacgtga ttgagcgtga cctgcaccgg cagttcccat tccatgagat gtttgtgtcc
600
cggggggggc acggccagca ggacctattc cgtgtgctga aggcctacac gctgtaccgg
660
cccaggagg gctactgcca ggcccaggcg cccattgccg ctgtcttgct catgcatatg
720
cctgctgagc aagccttctg gtgcctggta cagatctgtg agaagtacct gcccggtac
780
tacagcgaga aactggaggc gatccagctg gacggggaga tccttttctc gctgttgacg
840
aagtggtcgc cgggtggcca caagcacctc agccgtcaga agatcgacc gctcctctat
900
atgacagaat ggttcatgtg cgcttctcc cgaaccttgc cttggagctc tgtgctgcgt
960

caacagttag aaatcgtatg tctgattgac ccgggctgct tccgagaaat tgatgagcta
 840
 ataaaaaagg aaactaaagg caaaggttct ttggaagtac tcaatctgaa agatgtagaa
 900
 gaaggagatg agaaatttga atgacaccca tcaatctctt cacctctaaa aactaaagt
 960
 gtttccgttt ccgacggcac tgtttcatgt ctgtggtctg ccaaatactt gcttaaaacta
 1020
 tttgacattt tctatctttg tgttaacagt ggacacagca aggctttcct acataagtat
 1080
 aataatgtgg gaatgatttg gttttaatta taaactgggg tctaaatcct aaagcaaaat
 1140
 tgaaactcca agatgcaaag tccagagtgg cattttgcta ctctgtctca tgccttgata
 1200
 gctttccaaa atgaaagtta cttgaggcag ctcttggtgg tgaaaagtta tttgtacagt
 1260
 agagtaagat tattaggggt atgtctatac aacaaaagg ggggtctttc ctaaaaaaga
 1320
 aaacatatga tgcttcattt ctacttaatg gaacttgtgt tctgagggtc attatggtat
 1380
 cgtaataata agcttggtat atgttcctga ttatctgaga aacagatata gaaaaattgt
 1440
 gtcggactta aataattttc gttgaacatg ctgccataac ttagattatt cttggttaaa
 1500
 aaataaaaagt cacttatttc taattcttaa agtttataat atatattaat atagctaaaa
 1560
 ttgtatgtaa tcaataaaac cactcttatg tttattaaac tatggcttgt gtttctagac
 1620
 aaaaaaaaaa aaaaa
 1635

<210> 5442

<211> 250

<212> PRT

<213> Homo sapiens

<400> 5442

Met	Ser	Ile	Phe	Thr	Pro	Thr	Asn	Gln	Ile	Arg	Leu	Thr	Asn	Val	Ala
1				5					10					15	
Val	Val	Arg	Met	Lys	Arg	Ala	Gly	Lys	Arg	Phe	Glu	Ile	Ala	Cys	Tyr
			20					25					30		
Lys	Asn	Lys	Val	Val	Gly	Trp	Arg	Ser	Gly	Val	Glu	Lys	Asp	Leu	Asp
		35				40						45			
Glu	Val	Leu	Gln	Thr	His	Ser	Val	Phe	Val	Asn	Val	Ser	Lys	Gly	Gln
	50					55				60					
Val	Ala	Lys	Lys	Glu	Asp	Leu	Ile	Ser	Ala	Phe	Gly	Thr	Asp	Asp	Gln
65					70					75				80	
Thr	Glu	Ile	Cys	Lys	Gln	Ile	Leu	Thr	Lys	Gly	Glu	Val	Gln	Val	Ser
			85					90					95		
Asp	Lys	Glu	Arg	His	Thr	Gln	Leu	Glu	Gln	Met	Phe	Arg	Asp	Ile	Ala
		100					105						110		
Thr	Ile	Val	Ala	Asp	Lys	Cys	Val	Asn	Pro	Glu	Thr	Lys	Arg	Pro	Tyr
		115					120						125		
Thr	Val	Ile	Leu	Ile	Glu	Arg	Ala	Met	Lys	Asp	Ile	His	Tyr	Ser	Val

290	295	300
Tyr Lys Thr Leu Lys Lys Asp Glu Asp Ile Pro Leu Phe Pro Val Gln		
305	310	315
Thr Lys Tyr Met Asp Val Val Lys Glu Arg Ile Arg Leu Ala Arg Gln		
	325	330
Ile Glu Lys Ser Glu Tyr Arg Asn Phe Gln Ala Cys Leu His Asn Ser		
	340	345
Trp Ile Glu Gln Ala Ala Ala Ala Leu Glu Ile Glu Leu Glu Glu Asp		
	355	360
Met Tyr Lys Gly Gly Lys Ala Asp Gln Gln Glu Glu Arg Arg Arg Gln		
	370	375
Lys Gln Met Lys Val Leu Lys Lys Glu Leu Arg His Leu Leu Ser Gln		
385	390	395
Pro Leu Phe Thr Glu Ser Gln Lys Thr Lys Tyr Pro Thr Gln Ser Gly		
	405	410
Lys Pro Pro Leu Leu Val Ser Ala Pro Ser Lys Ser Glu Ser Ala Leu		
	420	425
Ser Cys Leu Ser Lys Gln Lys Lys Lys Lys Thr Lys Lys Pro Lys Glu		
	435	440
Pro Gln Pro Glu Gln Pro Gln Pro Ser Thr Ser Ala Asn		
	450	460

<210> 5441

<211> 1635

<212> DNA

<213> Homo sapiens

<400> 5441

```

ncagacacac tgtgacggct gcctgaagct agtgagtcgc ggcgcgcgcg actggtgggt
60
gggtcagtgc cgcgcgcgca tcggtcggtta ccgcgaggcg ctggtggcct tcaggctgga
120
cggcgcgggt cagccctgggt tcgcccgtt ctgggtcttt gaacagccgc gatgtcgatc
180
ttcaccccca ccaaccagat ccgcctaacc aatgtggccg tggtagcgat gaagcgtgcc
240
gggaagcgct tcgaaatcgc ctgctacaaa aacaaggctg tcggctggcg gagcggcggtg
300
gaaaaagacc tcgatgaagt tctgcagacc cactcagtgt ttgtaatgt ttctaaaggt
360
caggttgcca aaaaggaaga tctcatcagt gcgtttggaa cagatgacca aactgaaatc
420
tgtaagcaga ttttgactaa aggagaagtt caagtatcag ataaagaaag acacacacaa
480
ctggagcaga tgtttaggga cattgcaact attgtggcag acaaattgtgt gaatcctgaa
540
acaaagagac catacaccgt gatccttatt gagagagcca tgaaggacat ccactattcg
600
gtgaaaacca acaagagtac aaaacagcag gctttggaag tgataaagca gttaaaagag
660
aaatgaaga tagaacgtgc tcacatgagg cttcggttca tccttcagat gaatgaaggc
720
aagaagctga aagaaaagct caagccactg atcaaggctc tagaaagtga agattatggc
780

```


ttgatgttgt gaaataacat tcgttactgt tgtgaaaatc tgtcatgagc atttgtttaa
 4020
 taagcatacc attgaaacat gccacttgaa gatttctctg agatcatgag tttgtttaca
 4080
 cttgtctcaa gcctatctat agagaccctt ggatttagaa ttatagaact aaagtatctg
 4140
 agattacaga gatctcagag gttatgtgtt ctaactatta tcaaataaat aaatcctctc
 4200
 tatcacatcc cccaaaaaaaa aaaaaaaaaa aaaa
 4234

<210> 5440

<211> 461

<212> PRT

<213> Homo sapiens

<400> 5440

Leu	Ala	Val	Gln	Val	Lys	Gln	His	Ile	Asp	Ala	Val	Ala	Arg	Phe	Thr
1				5					10					15	
Gly	Ile	Lys	Thr	Ala	Ile	Leu	Val	Gly	Gly	Met	Ser	Thr	Gln	Lys	Gln
			20					25					30		
Gln	Arg	Met	Leu	Asn	Arg	Arg	Pro	Glu	Ile	Val	Val	Ala	Thr	Pro	Gly
		35					40					45			
Arg	Leu	Trp	Glu	Leu	Ile	Lys	Glu	Lys	His	Tyr	His	Leu	Arg	Asn	Leu
	50					55				60					
Arg	Gln	Leu	Arg	Cys	Leu	Val	Val	Asp	Glu	Ala	Asp	Arg	Met	Val	Glu
65					70					75				80	
Lys	Gly	His	Phe	Ala	Glu	Leu	Ser	Gln	Leu	Leu	Glu	Met	Leu	Asn	Asp
				85					90					95	
Ser	Gln	Tyr	Asn	Pro	Lys	Arg	Gln	Thr	Leu	Val	Phe	Ser	Ala	Thr	Leu
			100					105					110		
Thr	Leu	Val	His	Gln	Ala	Pro	Ala	Arg	Ile	Leu	His	Lys	Lys	His	Thr
	115					120						125			
Lys	Lys	Met	Asp	Lys	Thr	Ala	Lys	Leu	Asp	Leu	Leu	Met	Gln	Lys	Ile
	130					135					140				
Gly	Met	Arg	Gly	Lys	Pro	Lys	Val	Ile	Asp	Leu	Thr	Arg	Asn	Glu	Ala
145					150					155				160	
Thr	Val	Glu	Thr	Leu	Thr	Glu	Thr	Lys	Ile	His	Cys	Glu	Thr	Asp	Glu
				165					170					175	
Lys	Asp	Phe	Tyr	Leu	Tyr	Tyr	Phe	Leu	Met	Gln	Tyr	Pro	Gly	Arg	Ser
			180					185					190		
Leu	Val	Phe	Ala	Asn	Ser	Ile	Ser	Cys	Ile	Lys	Arg	Leu	Ser	Gly	Leu
	195					200						205			
Leu	Lys	Val	Leu	Asp	Ile	Met	Pro	Leu	Thr	Leu	His	Ala	Cys	Met	His
	210					215					220				
Gln	Lys	Gln	Arg	Leu	Arg	Asn	Leu	Glu	Gln	Phe	Ala	Arg	Leu	Glu	Asp
225					230					235				240	
Cys	Val	Leu	Leu	Ala	Thr	Asp	Val	Ala	Ala	Arg	Gly	Leu	Asp	Ile	Pro
				245					250					255	
Lys	Val	Gln	His	Val	Ile	His	Tyr	Gln	Val	Pro	Arg	Thr	Ser	Glu	Ile
			260					265					270		
Tyr	Val	His	Arg	Ser	Gly	Arg	Thr	Ala	Arg	Ala	Thr	Asn	Glu	Gly	Leu
	275					280						285			
Ser	Leu	Met	Leu	Ile	Gly	Pro	Glu	Asp	Val	Ile	Asn	Phe	Lys	Lys	Ile

ctggaagaag acatgtataa gggaggaaaa gctgaccagc aagaagaacg tcggagacaa
2400
aagcagatga aggttctgaa gaaggagctg cgccacctgc tgtcccagcc actgtttacg
2460
gagagccaga aaaccaagta tcccactcag tctggcaagc cgcccctgct tgtgtctgcc
2520
ccaagtaaga gcgagtctgc tttgagctgt ctctccaagc agaagaagaa gaagacaaag
2580
aagccgaagg agccacagcc ggaacagcca cagccaagta caagtgcaaa ttaactgcc
2640
tggtcaagtg tgtcagtgcac tgcacattgg tttctgttct ctggctatct gcaaaacctc
2700
tcccaccctt gtgtttcact ccaccacca cccaggtaa aaaagtctcc ctctcttcca
2760
ctcacacca tagcgggaga gacctcatgc agatttgcac tgttttggag taagaattca
2820
atgcagcagc ttaatttttc tgtattgcag tgtttatagg cttcttggtg gttaaacttg
2880
atttcataaa ttaaaaacaa tggtcagaaa aaaaaaaaa accggaaccg gcggcaccag
2940
ctcggagaga aatcgatgtt gtagtgacct tcagtaaaag agcgggtttt catagaggtg
3000
ccgttttaga ctacctattt aagaggcacg aaaaacaaat acatctaata ggttaagtaa
3060
aaaaccatct atttcggaca ataaaagtta tttctacac acgttgggtc tcattttact
3120
cgttaacagt atcatacatc cttctaagct tatctttttg acgtgaaagt gtagtagtat
3180
gtctccacct ggcagctatg tagttaatat tttgtctgt tgtaatgta tcaagtaccg
3240
aacattttcc taatgaaata gtggaaaaga caacctttt ctccatttct atttggattt
3300
ttagatcacg tacataacaa ggaatcgaat aaataatgaa gtgttttata aagagtatcc
3360
gtcttgagg gagattccag ttgggagggt ccataggcag ttcttaccac gaagatgtcg
3420
attccattct ccaacacca ctaccgaatt ccacaaggat ttgggaatct tcttgaaggg
3480
ctgacacgag agattctgag agagcaaccg gacaatatac cagcttttgc agcagcctat
3540
tttgagagcc ttctagagaa aagagagaaa accaactttg atccagcaga atgggggag
3600
aaggtagaag accgcttcta taacaatcat gcattcgagg agcaagaacc acctgagaaa
3660
agtgtccta aacaagaaga gtctcagata tctgggaagg aggaagagac atcagtcacc
3720
atcttagact cttctgagga agataaggaa aaagaagagg ttgctgctgt caaaatccaa
3780
gtgccttcc ggggacacat agccagagag gaggcaaaga aaatgaaaac aaatagtctt
3840
caaaatgagg aaaaagagga aaacaagtga ggacactggt tttacctcca ggaaacatga
3900
aaaataatcc aaatccatca accttcttat taatgtcatt tctccttgag gaaggaagat
3960

ttggcacctg ccatccgtga caaactggac atccttgggg ctgctgagac aggaagtggg
780
aaaactcttg cctttgccat cccaatgatt catgcggtgt tgcagtggca gaagaggaat
840
gctgcccctc ctccaagtaa caccgaagca ccacctggag agaccagaac tgaggccgga
900
gctgagacta gatcaccagg caaggetgaa gctgagtctg atgcattgcc tgacgatact
960
gtaattgaga gtgaagcact gccagtgat attgcagccg aggccagagc caagactgga
1020
ggcactgtct cagaccaggc gttgctcttt ggtgacgatg atgctggtga agggccttct
1080
tccttgatca gggagaaacc tgttcccaa cagaatgaga atgaggagga aaatcttgat
1140
aaagagcaga ctggaaatct aaaacaggag ttggatgaca aaagcgccac ctgtaaggca
1200
tatccaaagc gtcctctgct tggactggtt ctgactccca ctcgagagct ggccgtccag
1260
gtcaaacagc acattgatgc tgtggccagg ttacaggaa ttaaaactgc tattttggtt
1320
ggtggaatgt ccacgcagaa acagcagagg atgctgaacc gtcgtcctga gattgtggtt
1380
gctactccag gccggtctgt ggaattaatt aaagaaaagc attatcattt gaggaacctt
1440
cggcagctca ggtgcctggt agtggatgag gctgaccgga tggttgagaa aggccatttt
1500
gctgagctct cacagctgct agagatgctc aatgactccc aatacaacc c aaagagacaa
1560
acgcttgttt tttctgccac actcaccctg gtgcatcagg ctctgctcg aatccttcat
1620
aagaagcaca ccaagaaaat ggataaaaca gccaaacttg acctccttat gcagaaaatt
1680
ggcatgaggg gcaagcccaa ggtcattgac ctcacaagga atgaggccac ggtggagacg
1740
ctaacagaga ccaagatcca ttgtgagact gatgagaaag acttctactt gtactacttc
1800
ctgatgcagt atccaggccg cagcttagtg tttgccaca gtatctctg catcaaacgc
1860
ctctctgggc tcctcaaagt ccttgatata atgcccttga ccctgcatgc ctgtatgcac
1920
cagaagcaga ggctcagaaa cctggagcag tttgcccgtc tggaagactg tgttctcttg
1980
gcaacagatg tggcggctcg ggtctggat attcctaaag tccagcatgt catccattac
2040
caggccccac gtacctcgga gatttatgtc caccgaagtg gtcgaactgc tcgagctacc
2100
aatgaaggcc tcagtctgat gctcattggg cctgaggatg tgatcaactt taagaagatt
2160
tacaaaacgc tcaagaaaga tgaggatata cactgttcc ccgtgcagac aaaatacatg
2220
gatgtggtca aggagcgaat ccgtttagct cgacagattg agaaatctga gtatcggaac
2280
ttccaggctt gcctgcacaa ctcttgatt gagcaggcag cagctgccct ggagattgag
2340

```
<210> 5439
<211> 4234
<212> DNA
<213> Homo sapiens
```

```

<400> 5439
ggaggttctt cactcgcgac tgacggagct gcggtggcgt ctccacacgc aacctatgaag
60
ttgaaggaca caaaatcaag gccaaagcag tcaagctgtg gcaaatttca gacaaagggg
120
atcaaagttg tgggaaaatg gaaggaagtg aagattgacc caaatatgtt tgcagatgga
180
cagatggatg acttggtgtg ctttgaggaa ttgacagatt accagttggt ctccccctgcc
240
aagaatccct ccagtctctt ctcaaaggaa gcacccaaga gaaaggcaca agctgtttca
300
gaagaagagg aggaggagga gggaaagtct agctcaccaa agaaaaagat caagttgaag
360
aaaagtaaaa atgtagcaac tgaaggaacc agtaccaga agaatttga agtgaaagat
420
cttgagctgg aggccaggg agatgacatg gtttgtgatg atccggaggc tggggagatg
480
acatcagaaa acctggtcca aactgctcca aaaaagaaga aaaataaagg gaaaaaaggg
540
ttggagcctt ctgagagcac tgctgccaaag gtgcccaaaa aagcgaagac atggattcct
600
gaagttcatg atcagaaagc agatgtgtca gcttggaagg acctgtttgt tcccaggccg
660
gttctccgag cactcagctt tctaggcttc tctgcacca caccaatcca agccctgacc
720

```

gtggtgtcca acgtccagga gtatcgtgag tttgtgccct ggtgtaagaa gtctctggtg
 360
 gtatccagcc gtaaggggtca tttgaaagcc cagctggagg ttggctttcc acctgtcatg
 420
 gaacgttaca cctctgcagt ttccatggtc aaacctcaca tgggtcaaggc tgtttgact
 480
 gatggcaagc tcttcaacca cttagagact atttggcgat tcagccctgg tattcctgcc
 540
 tatcctcgaa cctgcactgt ggacttttcg atttcctttg aatttcgttc tctgctgcac
 600
 tcccagctgg ccaccatgtt ttttgatgag gttgtcaaac agaattgtgc tgcctttgag
 660
 cgtcgggcag ccaccaagtt tgggtccagaa acagccatcc cccgtgaact gatgttccat
 720
 gaggtgcacc agacttgagg caagggattg ctccctgacc tcccttctac cccacttccc
 780
 tacacaattc tcttatttat ttgggttggc tctgttcca atttgaaagg agtctgtgtt
 840
 cataatactg tttctcctct caatttccca gaaattgggt tctatgctgg ctggaaatgt
 900
 tgggggaaaag agaaggcaaa ggatgtggaa atgagatgtg cttaggaaag ggtcaggccc
 960
 atcgtaggag caccatatgc ctgcagcctt ttcactacga attagaataa ggactatgtg
 1020
 gttgtctctg gaccttatca agacacctta gtgtctgacc aggggacgat agtaactttt
 1080
 ctaaggattg aataaattga gcttttcttc tggcacagag gtactgagtg gtaagtaact
 1140
 tttaccctgc ctgagattcc tcaggagaaa aggcaacctg cctccagcct gaaatacata
 1200
 aagcctcatt ttaagactgt aagtccatgc tgcctggcta ctagagagca aggggctttc
 1260
 ttaccaccag tgctgaggag aaaagtactg aacggaaacg gagttgtctt tgtactcttg
 1320
 agttgtacct tattcttcca cttggcctga gtttttataa aatttcaata aattgtgaca
 1380
 gtgtgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1422

<210> 5438

<211> 245

<212> PRT

<213> Homo sapiens

<400> 5438

Phe	Arg	Gly	Gly	Val	Leu	Tyr	Trp	Asp	Ala	Gly	Ala	Ala	Gly	Thr
1			5				10						15	
Gly	Ser	Asn	His	Ala	Leu	Gly	Ala	Asn	Val	Glu	Leu	Trp	Ile	Met
			20				25						30	
Leu	Gln	Val	Val	Arg	Glu	Gly	Lys	Phe	Ser	Gly	Phe	Leu	Thr	Ser
			35				40						45	
Ser	Leu	Leu	Leu	Pro	Arg	Ala	Ala	Gln	Ile	Leu	Ala	Ala	Glu	Ala
			50				55						60	
Leu	Pro	Ser	Ser	Arg	Ser	Phe	Met	Gly	Phe	Ala	Ala	Pro	Phe	Thr
														Asn

tcttccccctt tctctaaccc catctccctc ccaggctcat ggtttctggt gcaatcctct
 300
 ttctccttac acaaggcaag aagttttctt accaatagat cagacctgtg aaggactgcc
 360
 cgacatgac tgatatgggt gttcttcatt ttgggctgta gtattttaaa gtagagggtt
 420
 gctctgatgg tcccatcact gcttgccatt gtctttccct ttgctctagc tatcagggga
 480
 tgttgcttta agtttggtcc ccaggcttta ctgccaagag ggaaattcat acccacttta
 540
 acaagggtg aagcttatct tacagttgct aatgcctcac tgaccttttg gaaagggtcat
 600
 agttaccctt caccggt
 617

<210> 5436

<211> 119

<212> PRT

<213> Homo sapiens

<400> 5436

Met Asn Phe Pro Leu Gly Ser Lys Ala Trp Gly Thr Asn Leu Lys Gln
 1 5 10 15
 His Pro Leu Ile Ala Arg Ala Lys Gly Lys Thr Met Ala Ser Ser Asp
 20 25 30
 Gly Thr Ile Arg Ala Asn Leu Tyr Phe Lys Ile Leu Gln Pro Lys Met
 35 40 45
 Lys Asn Asn His Ile Arg Ser Cys Arg Ala Val Leu His Arg Ser Asp
 50 55 60
 Leu Leu Val Arg Lys Leu Leu Ala Leu Cys Lys Glu Lys Glu Asp Cys
 65 70 75 80
 Asn Arg Asn His Glu Pro Gly Arg Glu Met Gly Leu Glu Lys Gly Glu
 85 90 95
 Glu Asn Trp Met Ser Asp Ile Ser Glu Thr Gln Asp Pro Phe Leu Gln
 100 105 110
 Tyr Tyr Ser Thr Ile Val Met
 115

<210> 5437

<211> 1422

<212> DNA

<213> Homo sapiens

<400> 5437

ttccgcggtg gaggggtgct atactgggat gcaggcgcgg cggggactgg cagcaatcat
 60
 gccctgggag ctaacgtaga gctttggata atgcttttgc aagttgtacg agaagggaag
 120
 ttctcggggt ttctgacctc ctgcagcctc ctcttgccctc gggctgcccc gatcttggcg
 180
 gctgaggctg gcttaccttc gagccgttcc ttcattgggat ttgctgctcc cttaccaaac
 240
 aagcgaaaagg cttactcgga gcgtagaatc atgggggtact caatgcagga gatgtatgag
 300

<400> 5433

gatctaacca acctccacta ctgcacaccc ctgccagcct ccctggacac caccgaccac
 60
 cactttggca gtatgagtgt ggggaatagt gtgaacaaca tcccagctgc tatgacccac
 120
 ctgggtataa gaagctcttc tgggtctccag agttctcgga gtaacccctc catccaagcc
 180
 acgctcaata agactgtgct ttctcttccc ttaaataacc acccacagac atctgttccc
 240
 aacgcactctg ctcttcaccc ttgcgtccgt ctgttttccc ttagcaaccc atctctttcc
 300
 accacaaacc tgagcggccc gtctcggcgt cggcagcctc ccgtcagccc tctcacgctt
 360
 tctcctggcc ctgaagcaca tcaag
 385

<210> 5434

<211> 128

<212> PRT

<213> Homo sapiens

<400> 5434

Asp	Leu	Thr	Asn	Leu	His	Tyr	Ser	Thr	Pro	Leu	Pro	Ala	Ser	Leu	Asp
1			5					10					15		
Thr	Thr	Asp	His	His	Phe	Gly	Ser	Met	Ser	Val	Gly	Asn	Ser	Val	Asn
			20					25				30			
Asn	Ile	Pro	Ala	Ala	Met	Thr	His	Leu	Gly	Ile	Arg	Ser	Ser	Ser	Gly
		35				40					45				
Leu	Gln	Ser	Ser	Arg	Ser	Asn	Pro	Ser	Ile	Gln	Ala	Thr	Leu	Asn	Lys
	50				55					60					
Thr	Val	Leu	Ser	Ser	Ser	Leu	Asn	Asn	His	Pro	Gln	Thr	Ser	Val	Pro
65				70				75				80			
Asn	Ala	Ser	Ala	Leu	His	Pro	Ser	Leu	Arg	Leu	Phe	Ser	Leu	Ser	Asn
			85					90				95			
Pro	Ser	Leu	Ser	Thr	Thr	Asn	Leu	Ser	Gly	Pro	Ser	Arg	Arg	Arg	Gln
		100					105					110			
Pro	Pro	Val	Ser	Pro	Leu	Thr	Leu	Ser	Pro	Gly	Pro	Glu	Ala	His	Gln
		115					120					125			

<210> 5435

<211> 617

<212> DNA

<213> Homo sapiens

<400> 5435

ctcacacctg taatcacagc actttgggag gctgaggtgt gagccactgc tcttggttg
 60
 aaacagataa ttctttatat tcaacctgtt gtcaaaattt ttagaaacat tttccagtt
 120
 ccttgataa gtatacttg tataacttct ggcaaaccat aattatgaac tcacattact
 180
 atagtactat aatactgcag aaagggatct tgcgtttcag aaatgtcact catccagttt
 240

465 470 475 480
 Ala Glu Arg Ala Gln Gln Val Ala Glu Gln Gln Ser Gln Gln Glu Cys
 485 490 495
 Gly Gly Thr Pro Pro Ala Ser Gln Ser Pro Phe His Arg Ser Leu Ser
 500 505 510
 Leu Glu Val Gly Gly Glu Pro Leu Gly Thr Ser Gly Ser Gly Pro Pro
 515 520 525
 Pro Asn Ser Leu Ala His Pro Gly Ala Trp Val Pro Gly Pro Pro Pro
 530 535 540
 Tyr Leu Pro Arg Gln Gln Ser Asp Gly Ser Leu Leu Arg Ser Gln Arg
 545 550 555 560
 Pro Met Gly Thr Ser Arg Arg Gly Leu Arg Gly Pro Ala Gln Val Ser
 565 570 575
 Ala Gln Leu Arg Ala Gly Gly Gly Gly Arg Asp Ala Pro Glu Ala Ala
 580 585 590
 Ala Gln Ser Pro Cys Ser Val Pro Ser Gln Val Pro Thr Pro Gly Phe
 595 600 605
 Phe Ser Pro Ala Pro Arg Glu Cys Leu Pro Pro Phe Leu Gly Val Pro
 610 615 620
 Lys Pro Gly Leu Tyr Pro Leu Gly Pro Pro Ser Phe Gln Pro Ser Ser
 625 630 635 640
 Pro Ala Pro Val Trp Arg Ser Ser Leu Gly Pro Pro Ala Pro Leu Asp
 645 650 655
 Arg Gly Glu Asn Leu Tyr Tyr Glu Ile Gly Ala Ser Glu Gly Ser Pro
 660 665 670
 Tyr Ser Gly Pro Thr Arg Ser Trp Ser Pro Phe Arg Ser Met Pro Pro
 675 680 685
 Asp Arg Leu Asn Ala Ser Tyr Gly Met Leu Gly Gln Ser Pro Pro Leu
 690 695 700
 His Arg Ser Pro Asp Phe Leu Leu Ser Tyr Pro Pro Ala Pro Ser Cys
 705 710 715 720
 Phe Pro Pro Asp His Leu Gly Tyr Ser Ala Pro Gln His Pro Ala Arg
 725 730 735
 Arg Pro Thr Pro Pro Glu Pro Leu Tyr Val Asn Leu Ala Leu Gly Pro
 740 745 750
 Arg Gly Pro Ser Pro Ala Ser Ser Ser Ser Ser Ser Pro Pro Ala His
 755 760 765
 Pro Arg Ser Arg Ser Asp Pro Gly Pro Pro Val Pro Arg Leu Pro Gln
 770 775 780
 Lys Gln Arg Ala Pro Trp Gly Pro Arg Thr Pro His Arg Val Pro Gly
 785 790 795 800
 Pro Trp Gly Pro Pro Glu Pro Leu Leu Leu Tyr Arg Ala Ala Pro Pro
 805 810 815
 Ala Tyr Gly Arg Gly Gly Glu Leu His Arg Gly Ser Leu Tyr Arg Asn
 820 825 830
 Gly Gly Gln Arg Gly Glu Gly Ala Gly Pro Pro Pro Pro Tyr Pro Thr
 835 840 845
 Pro Ser Trp Ser Leu His Ser Glu Gly Gln Thr Arg Ser Tyr Cys
 850 855 860

<210> 5433

<211> 385

<212> DNA

<213> Homo sapiens

35 40 45
 Leu Arg Ser Met Glu Leu Glu Ser Val Gly Met Gly Gly Ala Ala Ala
 50 55 60
 Phe Arg Glu Val Arg Val Gln Ser Val Val Val Glu Phe Leu Leu Thr
 65 70 75 80
 His Val Asp Val Leu Phe Ser Asp Thr Phe Thr Ser Ala Gly Leu Asp
 85 90 95
 Pro Ala Gly Arg Cys Leu Leu Pro Arg Pro Lys Ser Leu Ala Gly Ser
 100 105 110
 Cys Pro Ser Thr Arg Leu Leu Thr Leu Glu Glu Ala Gln Ala Arg Thr
 115 120 125
 Gln Gly Arg Leu Gly Thr Pro Thr Glu Pro Thr Thr Pro Lys Ala Pro
 130 135 140
 Ala Ser Pro Ala Glu Arg Arg Lys Gly Glu Arg Gly Glu Lys Gln Arg
 145 150 155 160
 Lys Pro Gly Gly Ser Ser Trp Lys Thr Phe Phe Ala Leu Gly Arg Gly
 165 170 175
 Pro Ser Val Pro Arg Lys Lys Pro Leu Pro Trp Leu Gly Gly Thr Arg
 180 185 190
 Ala Pro Pro Gln Pro Ser Gly Ser Arg Pro Asp Thr Val Thr Leu Arg
 195 200 205
 Ser Ala Lys Ser Glu Glu Ser Leu Ser Ser Gln Ala Ser Gly Ala Gly
 210 215 220
 Leu Gln Arg Leu His Arg Leu Arg Arg Pro His Ser Ser Ser Asp Ala
 225 230 235 240
 Phe Pro Val Gly Pro Ala Pro Ala Gly Ser Cys Glu Ser Leu Ser Ser
 245 250 255
 Ser Ser Ser Ser Glu Ser Ser Ser Ser Glu Ser Ser Ser Ser Ser Ser
 260 265 270
 Glu Ser Ser Ala Ala Gly Leu Gly Ala Leu Ser Gly Ser Pro Ser His
 275 280 285
 Arg Thr Ser Ala Trp Leu Asp Asp Gly Asp Glu Leu Asp Phe Ser Pro
 290 295 300
 Pro Arg Cys Leu Glu Gly Leu Arg Gly Leu Asp Phe Asp Pro Leu Thr
 305 310 315 320
 Phe Arg Cys Ser Ser Pro Thr Pro Gly Asp Pro Ala Pro Pro Ala Ser
 325 330 335
 Pro Ala Pro Pro Ala Pro Ala Ser Ala Phe Pro Pro Arg Val Thr Pro
 340 345 350
 Gln Ala Ile Ser Pro Arg Gly Pro Thr Ser Pro Ala Ser Pro Ala Ala
 355 360 365
 Leu Asp Ile Ser Glu Pro Leu Ala Val Ser Val Pro Pro Ala Val Leu
 370 375 380
 Glu Leu Leu Gly Ala Gly Gly Ala Pro Ala Ser Ala Thr Pro Thr Pro
 385 390 395 400
 Ala Leu Ser Pro Gly Arg Ser Leu Arg Pro His Leu Ile Pro Leu Leu
 405 410 415
 Leu Arg Gly Ala Glu Ala Pro Leu Thr Asp Ala Cys Gln Gln Glu Met
 420 425 430
 Cys Ser Lys Leu Arg Gly Ala Gln Gly Pro Leu Gly Pro Asp Met Glu
 435 440 445
 Ser Pro Leu Pro Pro Pro Pro Leu Ser Leu Leu Arg Pro Gly Gly Ala
 450 455 460
 Pro Pro Pro Pro Pro Lys Asn Pro Ala Arg Leu Met Ala Leu Ala Leu

tcacagggttc ctacccccgg cttcttctcc ccagccccca gggagtgcct gccacccttc
 1860
 ctcgggggtcc ccaagccagg cttgtacccc ctggggcccc catccttcca gccagttcc
 1920
 ccagccccag tctggaggag ctctctgggc cccctgcac cactcgacag gggagagaac
 1980
 ctgtactatg agatcggggc aagtgagggg tccccctatt ctggccccac ccgctcctgg
 2040
 agtccctttc gtcctatgcc ccccgacagg ctcaatgcct cctacggcat gcttggccaa
 2100
 tcacccccac tccacaggtc ccccgacttc ctgctcagct acccgccagc cccctcctgc
 2160
 tttccccctg accaccttgg ctactcagcc ccccgacacc ctgctcggcg ccctacaccg
 2220
 cctgagcccc tctacgtcaa cctagcteta gggcccaggg gtccctcacc tgctcttcc
 2280
 tcctcctctt cccctcctgc ccacccccga agccgttcag atcccggtcc ccagtcctcc
 2340
 cgccttcccc agaaacaacg ggcaccctgg ggaccccgta cccctcatag ggtgccgggt
 2400
 ccctggggcc ctctgagcc tctcctgtc tacagggcag ccccgccagc ctacggaagg
 2460
 gggggcgagc tccaccgagg gtcctgttac agaaatggag ggcaaagagg ggagggggct
 2520
 ggtccccac ccccttacc cactccagc tgggtccctcc actctgaggg ccagaccga
 2580
 agctactgct gagcaccagc tgggaggggc cgtccttctt tcccttcacc ctactggat
 2640
 cttggcccaa ccaaatccct tgttttgtat tttcttgaac cccgaccact accccaggtt
 2700
 tctaacttg taacttgctt ctgatgtggg tccctaacct ataatctcag cttccctacc
 2760
 ctggactgaa gggctctccc atccccccac caccctccat cctggggggc ctgcacaaa
 2820
 tctgggggtg gaggggctag gctgacccca tctcctctc cctccaggag ccccgagat
 2880
 gtccctgacct gtgcacgggg atggggggac aactcctacc cttctttccc cacatgcccc
 2940
 actaaacat ctgacaacat taatgaataa aatggtgaaa atgtgaaaaa aaaaaaaaaa
 3000
 aaaaa
 3005

<210> 5432

<211> 863

<212> PRT

<213> Homo sapiens

<400> 5432

Xaa His Asp Val Ile Gln Gln Leu Pro Pro Pro His Tyr Arg Thr Leu
 1 5 10 15
 Glu Tyr Leu Leu Arg His Leu Ala Arg Met Ala Arg His Ser Ala Asn
 20 25 30
 Thr Ser Met His Ala Arg Asn Leu Ala Ile Val Trp Ala Pro Asn Leu

ggcgcgggcg cgttccggga agttcgggtg cagtcgggtg tggaggagtt tctgctcacc
240
catgtggagc tcctgttcag cgacaccttc acctccgccg gcctcgaccc tgcaggccgc
300
tgctgtctcc ccaggcccaa gtcccttgcg ggcagctgcc cctccaccgc cctgctgacg
360
ctggaggaag cccaggcacg caccaggggc cggctgggga cgccacgga gccacaaact
420
cccaaggccc cggcctcacc tgcggaaagg aggaaggagg agagagggga gaagcagcgg
480
aagccagggg gcagcagctg gaagacgttc tttgcaactg gccggggccc cagtgtccct
540
cgaaagaagc ccctgccctg gctggggggc acctgtgcc caccgcagcc ttcaggcagc
600
agaccgcaca ccgtcacact gagatctgcc aagagcgagg agtctctgtc atcgaggcc
660
agcggggctg gcctccagag gctgcacagg ctgcggcgac cccactccag cagcgacgt
720
ttccctgtgg gccagcacc tgcctgctcc tgcgagagcc tgcctcgtc ctctctctcc
780
gagtcctcct cctctgagtc ctctctctcc tctctgagt cctcagcagc tgggctgggg
840
gcactctctg ggtctccctc acaccgtacc tcagcctggc tagatgatgg tgatgagctg
900
gacttcagcc caccgcgtg cctggaggga ctccgggggc tggactttga tcccttaacc
960
ttccgctgca gcagccccc cccaggggat cccgcacctc ccgccagccc agcacccccc
1020
gcccctgcct ctgccttccc acccagggtg acccccccagg ccatctcgcc ccggggggcc
1080
accagccccg cctcgctgc tgccttagac atctcagagc ccctggctgt atcagtcca
1140
cccgtgtcc tagaactgct gggggctggg ggagcacctg cctcagccac cccaacacca
1200
gctctcagcc ccggccggag cctgcgcccc catctcatac ccctgctgct gcgaggagcc
1260
gaggccccgc tgactgacgc ctgccagcag gagatgtgca gcaagctccg gggagcccag
1320
ggcccactcg gtctgatata ggagtcacca ctgccacccc ctcccctgtc tctcctgcgc
1380
cctgggggtg cccaccccc gcccctaag aaccagcac gcctcatggc cctggccctg
1440
gctgagcggg ctcagcaggt ggccgagcaa cagagccagc aggagtgtgg gggaccccca
1500
cctgttccc aatccccctt ccaccgctcg ctgtctctgg aggtgggcgg ggagcccctg
1560
gggacctcag ggagtgggcc acctcccaac tcctagcac acccgggtgc ctgggtcccc
1620
ggacccccac cctacttacc aaggcaacaa agtgatggga gcctgctgag gagccagcgg
1680
cccatgggga cctcaaggag gggactccga ggccctgccc aggtcagtgc gcagctcagg
1740
gcaggtggcg ggggcaggga tgcgccagag gcagcagccc agtccccatg ttctgtcccc
1800

ccggcgggag gcaaggtccc gggccagcat gggggcttcg tggtgactgt caagcaagag
 60
 cgccggcagg gtccacgcgc gggcgagaag gggccccacg aggaggaggt gagagtccct
 120
 gcgctgagct gggggaggcc ccggggtccc gccccagcct cgaagccccg cccaggctg
 180
 gatttgaatt gcttgtggct ccgcccacag cccattttcc tctggaagct gagaccccg
 240
 cccgtgccag ctgccacgcc cctgacaggt cctctgccac tctaagtcca ggccccgccc
 300
 accgcacaat gccagctctg cccactctaa ggtcccgccc acttcactc cttgggggag
 360
 gcaccctccc cttggtctg tgggcccgtt ctccagcaga aaaccacgcc caccaagcag
 420
 agggcacgcc cacaaccgaa gtcaacgccca accctgtact caaacctcgg cccatagttc
 480
 ctcagatccc ctccacctg gccagggatc cctctaacc accgtgtccc gactgtgtac
 540
 cgggccctac ctccatcttt tccgggttct tctcccagc taggccccgc ccccatcccc
 600
 gcccatacgc gt
 612

<210> 5430

<211> 94

<212> PRT

<213> Homo sapiens

<400> 5430

Pro	Ala	Gly	Gly	Lys	Ala	Pro	Gly	Gln	His	Gly	Gly	Phe	Val	Val	Thr
1				5				10					15		
Val	Lys	Gln	Glu	Arg	Gly	Glu	Gly	Pro	Arg	Ala	Gly	Glu	Lys	Gly	Ser
		20					25					30			
His	Glu	Glu	Glu	Val	Arg	Val	Pro	Ala	Leu	Ser	Trp	Gly	Arg	Pro	Arg
	35					40					45				
Ala	Pro	Ala	Pro	Ala	Ser	Lys	Pro	Arg	Pro	Arg	Leu	Asp	Leu	Asn	Cys
	50				55					60					
Leu	Trp	Leu	Arg	Pro	Gln	Pro	Ile	Phe	Leu	Trp	Lys	Leu	Arg	Pro	Arg
65			70				75					80			
Pro	Val	Pro	Ala	Ala	Thr	Pro	Leu	Thr	Gly	Pro	Leu	Pro	Leu		
			85				90								

<210> 5431

<211> 3005

<212> DNA

<213> Homo sapiens

<400> 5431

nngcacgatg tcatccagca gctgccccca ccacattaca ggaccctgga gtacctgctg
 60
 aggcacctgg cccgcatggc gagacacagt gccaacacca gcatgcatgc ccgcaacctg
 120
 gccattgtct gggcacccaa cctgctacgg tccatggagc tggagtcagt gggaatgggt
 180

<400> 5429

	500		505		510
Glu Ser Pro Thr Asp Ala Thr Gln Glu Glu Asp Val Asp Asp Met Glu					
515		520		525	
Gly Ser Gly Glu Glu Gly Asp Leu Glu Gly Ser Asp Ser Glu Ala Ala					
530		535		540	
Gln Trp Ala Asp Gln Glu Gln Trp Phe Gly Met Ser Glu Gly Ala Ala					
545		550		555	560
Ala Pro Trp Pro Gln Trp Pro Ala Leu Leu					
	565		570		

<210> 5425

<211> 639

<212> DNA

<213> Homo sapiens

<400> 5425

cggccgcccc tgtgatcaaa cggtatacag cccagggcgcc agatgagctg tcctttgagg
 60
 tgaggctgtg gggaagcaga ttccagctgg gctccccaca cccctgctc cttctgacct
 120
 ttctcttccc acccgccctc tcccaggtgg gagacattgt ctcggtgatc gacatgccac
 180
 ccacagagga tcggagctgg tggcggggca agcgaggctt ccaggctcggg ttcttcccc
 240
 gtgagtgtgt ggaactcttc acagagcggc caggtccggg cctgaaggcg gatgccgatg
 300
 gccccccatg tggcatcccg gctccccagg gtatctcgtc tctgacctca gctgtgccac
 360
 ggctctcgtg gaagctggcc ggctgtctc gcacctcat gcgtcccg ccttctcggc
 420
 agcggctgcg gcagcgggga atcctgcgac agagggtgtt tggtgcgat cttggcgagc
 480
 acctcagcaa ctcaggccag gatgtgcccc gtgtgcgct gctgtccga gttcattgag
 540
 gccnacgggg tgggtgatgg gatctaccgg ctctcaggcg tgtcttccaa catccagagg
 600
 cttcggcacg agtttgacag tgagaggata ccggagctg
 639

<210> 5426

<211> 98

<212> PRT

<213> Homo sapiens

<400> 5426

Pro	Gln	Leu	Cys	His	Gly	Leu	Val	Gly	Ser	Trp	Pro	Ala	Cys	Ser	Ala
1				5					10					15	
Pro	Ser	Cys	Ala	Pro	Ala	Leu	Leu	Gly	Ser	Gly	Cys	Gly	Ser	Gly	Glu
		20						25					30		
Ser	Cys	Asp	Arg	Gly	Cys	Leu	Ala	Ala	Ile	Leu	Ala	Ser	Thr	Ser	Ala
		35				40					45				
Thr	Gln	Ala	Arg	Met	Cys	Pro	Val	Leu	Arg	Cys	Cys	Ser	Glu	Phe	Ile
	50				55					60					
Glu	Ala	Xaa	Gly	Val	Val	Asp	Gly	Ile	Tyr	Arg	Leu	Ser	Gly	Val	Ser

65					70					75					80
Ala	Ser	Thr	Pro	Gln	Ser	Gln	Cys	Leu	Pro	Ser	Glu	Ile	Glu	Val	Lys
				85					90					95	
Tyr	Lys	Met	Ala	Glu	Cys	Tyr	Thr	Met	Leu	Lys	Gln	Asp	Lys	Asp	Ala
			100					105					110		
Ile	Ala	Ile	Leu	Asp	Gly	Ile	Pro	Ser	Arg	Gln	Arg	Thr	Pro	Lys	Ile
		115				120						125			
Asn	Met	Met	Leu	Ala	Asn	Leu	Tyr	Lys	Lys	Ala	Gly	Gln	Glu	Arg	Pro
	130					135					140				
Ser	Val	Thr	Ser	Tyr	Lys	Glu	Val	Leu	Arg	Gln	Cys	Pro	Leu	Ala	Leu
145					150					155				160	
Asp	Ala	Ile	Leu	Gly	Leu	Leu	Ser	Leu	Ser	Val	Lys	Gly	Ala	Glu	Val
			165						170					175	
Ala	Ser	Met	Thr	Met	Asn	Val	Ile	Gln	Thr	Val	Pro	Asn	Leu	Asp	Trp
		180						185					190		
Leu	Ser	Val	Trp	Ile	Lys	Ala	Tyr	Ala	Phe	Val	His	Thr	Gly	Asp	Asn
	195					200						205			
Ser	Arg	Ala	Ile	Ser	Thr	Ile	Cys	Ser	Leu	Glu	Lys	Lys	Ser	Leu	Leu
	210					215					220				
Arg	Asp	Asn	Val	Asp	Leu	Leu	Gly	Ser	Leu	Ala	Asp	Leu	Tyr	Phe	Arg
225					230					235				240	
Ala	Gly	Asp	Asn	Lys	Asn	Ser	Val	Leu	Lys	Phe	Glu	Gln	Ala	Gln	Met
			245						250					255	
Leu	Asp	Pro	Tyr	Leu	Ile	Lys	Gly	Met	Asp	Val	Tyr	Gly	Tyr	Leu	Leu
	260						265					270			
Ala	Arg	Glu	Gly	Arg	Leu	Glu	Asp	Val	Glu	Asn	Leu	Gly	Cys	Arg	Leu
	275					280						285			
Phe	Asn	Ile	Ser	Asp	Gln	His	Ala	Glu	Pro	Trp	Val	Val	Ser	Gly	Cys
	290					295						300			
His	Ser	Phe	Tyr	Ser	Lys	Arg	Tyr	Ser	Arg	Ala	Leu	Tyr	Leu	Gly	Ala
305					310					315				320	
Lys	Ala	Ile	Gln	Leu	Asn	Ser	Asn	Ser	Val	Gln	Ala	Leu	Leu	Leu	Lys
			325						330					335	
Gly	Ala	Ala	Leu	Arg	Asn	Met	Gly	Arg	Val	Gln	Glu	Ala	Ile	Ile	His
	340						345						350		
Phe	Arg	Glu	Ala	Ile	Arg	Leu	Ala	Pro	Cys	Arg	Leu	Asp	Cys	Tyr	Glu
	355					360						365			
Gly	Leu	Ile	Glu	Cys	Tyr	Leu	Ala	Ser	Asn	Ser	Ile	Arg	Glu	Ala	Met
	370					375					380				
Val	Met	Ala	Asn	Asn	Val	Tyr	Lys	Thr	Leu	Gly	Ala	Asn	Ala	Gln	Thr
385					390					395				400	
Leu	Thr	Leu	Leu	Ala	Thr	Val	Cys	Leu	Glu	Asp	Pro	Val	Thr	Gln	Glu
			405						410					415	
Lys	Ala	Lys	Thr	Leu	Leu	Asp	Lys	Ala	Leu	Thr	Gln	Arg	Pro	Asp	Tyr
	420						425						430		
Ile	Lys	Ala	Val	Val	Lys	Lys	Ala	Glu	Leu	Leu	Ser	Arg	Glu	Gln	Lys
	435						440					445			
Tyr	Glu	Asp	Gly	Ile	Ala	Leu	Leu	Arg	Asn	Ala	Leu	Ala	Asn	Gln	Ser
	450					455				460					
Asp	Cys	Val	Leu	His	Arg	Ile	Leu	Gly	Asp	Phe	Leu	Val	Ala	Val	Asn
465					470					475				480	
Glu	Tyr	Gln	Glu	Ala	Met	Asp	Gln	Tyr	Ser	Ile	Ala	Leu	Ser	Leu	Asp
			485						490					495	
Pro	Asn	Asp	Gln	Lys	Ser	Leu	Glu	Gly	Met	Gln	Lys	Met	Glu	Lys	Glu

gcctgaccc aaaggccaga ttacattaag gctgtggtga aaaaagcaga actacttagc
 1380
 agagaacaga aatatgaaga tggaattgct ttgctgagga acgcactggc taatcagagt
 1440
 gactgtgtcc tgcacggat cctaggagat ttcctttag ctgtcaatga gtatcaggag
 1500
 gcaatggacc agtatagtat agcactaagt ttggaccca atgaccagaa gtctctagag
 1560
 gggatgcaga agatggagaa ggaggagagt cccacggatg ccactcagga ggaggatgtg
 1620
 gacgacatgg aaggagtg ggaagaagg gacctggagg gcagcgacag tgaggcggcc
 1680
 cagtgggctg accaggagca gtggttcggc atgagtggagg gggcggcagc tccatggccg
 1740
 cagtggcctg ccctgctctg agcacttccg tggactgaag gaaccgtagg agcctgctct
 1800
 cagaaggaca atgattcagc atgtgattgc agcaggggtc tctgccccct cgctcccaat
 1860
 tcctagtctg gacttcattt ctaaacaga gctgaccaa ccttccatgt atctccatcc
 1920
 tccccctgc cagccaggga ggactgaggg agtgccccga gaccacgca catgttgggg
 1980
 cttctgggccc aagagtactt tttatataac taatttctaa atccaaaagc tcaaggaata
 2040
 gacagtgttc tgtgacatgg attggtttga aggagttacc caccatccca gcacgataat
 2100
 gtcactctcc aagttggatg gcagcacgat ctggccctag ggagcttcct gttcccagaa
 2160
 gtcattgtcc tgggctatcc agatgtccct agtaaatctt gcttccttct gcaatgttag
 2220
 taatgcctta agctgacagt tgctattttg cagaacagtt ttcctctttg cttagctagt
 2280
 aacttgctc tgagcctggg ctgatctgag aaacaggtgt gacaagagca tgaaccagag
 2340
 gtgcacctgg ggcagttccc taataaaact ggttgtaca gtcatggtgt tggggtgatc
 2400
 agaatggaag cccttttcaa aataaaa
 2427

<210> 5424

<211> 570

<212> PRT

<213> Homo sapiens

<400> 5424

Met	Ala	Ala	Ala	Gly	Leu	His	Ser	Asn	Val	Arg	Leu	Leu	Ser	Ser	Leu
1			5						10				15		
Leu	Leu	Thr	Met	Ser	Asn	Asn	Asn	Pro	Glu	Leu	Phe	Ser	Pro	Pro	Gln
		20						25				30			
Lys	Tyr	Gln	Leu	Leu	Val	Tyr	His	Ala	Asp	Ser	Leu	Phe	His	Asp	Lys
	35						40				45				
Glu	Tyr	Arg	Asn	Ala	Val	Ser	Lys	Tyr	Thr	Met	Ala	Leu	Gln	Gln	Lys
	50					55				60					
Lys	Ala	Leu	Ser	Lys	Thr	Ser	Lys	Val	Arg	Pro	Ser	Thr	Gly	Asn	Ser

260
 Ala Arg Glu Met
 275

265
 270

<210> 5423
 <211> 2427
 <212> DNA
 <213> Homo sapiens

<400> 5423
 nccgcggctt tgcagagcag gatgaatgtg atagaccacg tgcgggacat ggcgggccgcg
 60
 gggtgcact ccaacgtgcg gctcctcagc agcttggttac ttacaatgag taataacaac
 120
 cctgagttat tctccccacc tcagaagtac cagcttttgg tgtatcatgc agattctctc
 180
 tttcatgata aggaatatcg gaatgctgtg agtaagtata ccatggcttt acagcagaag
 240
 aaagcgctaa gtaaaacttc aaaagtgaga ccttcaactg gaaattctgc atctactcca
 300
 caaagtcagt gtcttccatc tgaaattgaa gtgaaatata aaatggctga atgttatata
 360
 atgctaaaac aagataaaga tgccattgct atacttgatg ggatcccttc aagacaaaga
 420
 actcccaaaa taaacatgat gctggcaaac ctgtacaaga aggctgggtca ggagcgccct
 480
 tcagtcacca gctataagga ggtgctgagg cagtgcccat tagcccttga tgccattcta
 540
 ggcttggtgt ccccttctgt aaaaggggca gaggtggcat ccatgacaat gaatgtgatc
 600
 caaacctgct ctaacttga ctggctctct gtgtggatca aagcgtatgc ttttgtgcac
 660
 actggtgaca actcaagagc aatcagtacc atctgttcac tagagaaaaa atccttattg
 720
 cgagataacg tggacctatt gggagcttg gcagatctgt acttcagagc tggagacaat
 780
 aaaaactctg tcctcaagtt tgaacaggca cagatgttgg atccttatct gataaaagga
 840
 atggatgtat atggctacct actggcacga gaagggcggc tagaggatgt tgagaacctt
 900
 ggatgccgcc ttttcaatat ctctgatcag catgcagaac cgtgggtggt ttctggctgt
 960
 cacagcttct atagcaaacg ctactcccg gccctctatt taggagccaa ggccattcag
 1020
 ctgaacagta atagtgttca agctctgcta cttaaggag cagcacttag gaacatgggc
 1080
 agagtccaag aagcaataat ccactttcgg gaggccatac ggctcgacc ttgtcgctta
 1140
 gattgttatg aaggtcttat cgaatgttac ttagcctcca acagtattcg agaagcaatg
 1200
 gtaatggcta acaacgttta caaaactctg ggagcaaatg cacagaccct taccctttta
 1260
 gccaccgttt gtcttgaaga ccagtgaca caggagaaag ccaaacatt attagataaa
 1320

atcccccttcc ccagcttctc gtcggggctg gccttggtgc tgcctctc tcatgccaccg
 900
 cccttggtct ctggccctc taccagttcg atgagaagta tggcggccag cctcggcgct
 960
 cgagagatgt aagctgcagc cgcagecatg cctactacgt gtgtgcctgg gaccgcccac
 1020
 tggctgtggc catctgacg gccatcaacc tactggcgta tgtggctgac ctggtgcact
 1080
 ctgcccacct gggttttgc aaggtttaag actctcccaa gaggtcccg ttcctctcc
 1140
 aacctctttg ttcttggtgc ccgagtttc tttatggagt acttctttcc cccgccttc
 1200
 gtctgttttc ctttctctgt cttccctccc ttcacgcgt
 1239

<210> 5422

<211> 276

<212> PRT

<213> Homo sapiens

<400> 5422

Met	Pro	Val	Thr	Val	Thr	Arg	Thr	Thr	Ile	Thr	Thr	Thr	Thr	Ser
1				5					10				15	
Ser	Ser	Gly	Leu	Gly	Ser	Pro	Met	Ile	Val	Gly	Ser	Pro	Arg	Ala
			20					25					30	Leu
Thr	Gln	Pro	Leu	Gly	Leu	Leu	Arg	Leu	Leu	Gln	Leu	Val	Ser	Thr
			35				40					45		Cys
Val	Ala	Phe	Ser	Leu	Val	Ala	Ser	Val	Gly	Ala	Trp	Thr	Gly	Ser
			50				55				60			Met
Gly	Asn	Trp	Ser	Met	Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Val	Thr
					70					75				80
Ile	Ile	Leu	Ile	Val	Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro
				85					90					95
Ser	Trp	Arg	Asn	Phe	Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu
					100				105				110	Phe
Cys	Leu	Ser	Ala	Ser	Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe
					115				120				125	Leu
Ser	His	Gly	Arg	Ser	Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe
						135					140			Ser
Cys	Ile	Ala	Cys	Val	Ala	Tyr	Ala	Thr	Glu	Val	Ala	Trp	Thr	Arg
					150					155				160
Arg	Pro	Gly	Glu	Ile	Thr	Gly	Tyr	Met	Ala	Thr	Val	Pro	Gly	Leu
				165					170					175
Lys	Val	Leu	Glu	Thr	Phe	Val	Ala	Cys	Ile	Ile	Phe	Ala	Phe	Ile
				180					185				190	Ser
Asp	Pro	Asn	Leu	Tyr	Gln	His	Gln	Pro	Ala	Leu	Glu	Trp	Cys	Val
					195				200				205	Ala
Val	Tyr	Ala	Ile	Cys	Phe	Ile	Leu	Ala	Ala	Ile	Ala	Ile	Leu	Leu
						215					220			Asn
Leu	Gly	Glu	Cys	Thr	Asn	Val	Leu	Pro	Ile	Pro	Phe	Pro	Ser	Phe
					230					235				240
Ser	Gly	Leu	Ala	Leu	Cys	Leu	Ser	Ser	Ser	Met	Pro	Pro	Pro	Leu
					245				250					255
Ser	Gly	Pro	Ser	Thr	Ser	Ser	Met	Arg	Ser	Met	Ala	Ala	Ser	Leu
														Gly

```

<400> 5421
nccagctgcc gctgtcgtct ttgcttcagc cgcagtcgcc actggctgcc tgagggtgctc
60
ttacagcctg ttccaagtgt ggcttaatcc gtctccacca ccagatcttt ctccgtggat
120
tctctgcta agaccgctgc catgccagtg acggtaacct gcaccaccat cacaaccacc
180
acgacgtcat cttcgggcct ggggtcccc atgatcgtgg ggtcccctcg ggccctgaca
240
cagccccctg gtctccttcg cctgctgcag ctggtgtcta cctgcgtggc cttctcgctg
300
gtggctagcg tgggcgcctg gacggggctc atgggcaact ggtccatgtt cacctggtgc
360
ttctgcttct ccgtgaccct gatcaccctc atcgtggagc tgtgcgggct ccaggcccgc
420
ttccccctgt cttgggcgaa cttccccatc accttcgct gctatgcggc cctcttctgc
480
ctctcggcct ccatcatcta cccaccacc tatgtccagt tctgtccca cggccgttcg
540
cgggaccacg ccacgcgcgc caccttcttc tctgcatcg cgtgtgtggc ttacgccacc
600
gaagtggcct ggaccgggc cgggccggc gagatcactg gctatatggc caccgtaacc
660
gggctgctga aggtgctgga gaccttcgtt gcctgcac ca tcttcgctt catcagegac
720
cccaacctgt accagcacca gccggccctg gagtgggtgc tggcgggtga cgccatctgc
780
ttcatcctag cggccatcgc catcctgctg aacctggggg agtgcaccaa cgtgctaccc
840

```

500 505 510
 Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr Ser Arg Leu Leu Ala
 515 520 525

<210> 5419
 <211> 989
 <212> DNA
 <213> Homo sapiens

<400> 5419
 ttttcgtcca ggagtcggag gagcaagtcc aggtcccgtt cccgaaggcg ccaccagcgg
 60
 aagtacaggc gctactcgcg gtcatactcg cggagccggt cgcgatcccg cagccgccgt
 120
 taccgagaga ggcgctacgg gttcaccagg agatactacc ggtctccttc gcggtaccgg
 180
 tcccgggtccc gtagcaggtc gcgctctcgg ggaagggtcgt actgcggaag ggcgtacgcg
 240
 atcgcgcggg gacagcgcta ctacggcttt ggtcgcacag tgtaccggga ggagcacagc
 300
 agatggaggg acagatccag gacgaggtcg cggagcagaa ccccttttcg cttaagtga
 360
 aaagatcgaa tggagctggt agaaatagca aaaaccaatg cagcgaaagc tctaggaaca
 420
 accaacattg acttgccagc tagtctcaga actgttcctt cagccaaaga aacaagccgt
 480
 ggaataggtg tatcaagtaa tggtgcaaag cctgaaaaat catgaatgtg gtctgcagac
 540
 attgatgaag aaaatctggt gctgtcggaa aaggtaacag aagatggaac tcgaaatccc
 600
 aatgaaaaac ctaccagca aagaagcata gcttttagct ctaataattc ttagcaaaag
 660
 ccaatacaaa aatcagctaa agctgccaca gaagaggcat cttcaagatc accaaaaata
 720
 gatcagaaaa aaagtccata tggactgtgg atacctatct aaaagaagaa aactgatggc
 780
 taagtttgca tgaaaactgc actttattgc aagttagtgt ttctagcatt atcccatccc
 840
 tttgagccat tcaggggtac ttgtgcattt aaaaaccaac acaaaaagat gtaaatactt
 900
 aacactcaaa tattaacatt ttaggtttct cttgcagata tgagagatag cacagatgga
 960
 ccaaaggtta tgcacagggt ggagtccttt
 989

<210> 5420
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 5420
 Phe Ser Ser Arg Ser Arg Arg Ser Lys Ser Arg Ser Arg Ser Arg Arg
 1 5 10 15
 Arg His Gln Arg Lys Tyr Arg Arg Tyr Ser Arg Ser Tyr Ser Arg Ser

4602

gaccagagga cttatgtttt ccgggcccag agcgctgaaa tgaaggaacg agggggcaac
 1020
 cagaccagtg gcacgcactt ctttattacc caagaacgga ttgttttcct ggacacacag
 1080
 cccatcctga gcccttctat cctagaccat ctcatcaata atgaccgcaa actgcctcca
 1140
 gagtacaacc ttccccacac ttacgttgaa atgcagtcac tccagattgc tgccttcctt
 1200
 ttcacggtct gccatgtggt gattgtgtgc caggactggt tcacagacct cagtctctac
 1260
 aggctgtggg acctgggggtg caagtgcgaag agcaacagcc actcacccca aaccccaagg
 1320
 ttctgcaga cagcagagat ggtgaagccc tccaccccat ccccagcca cgagtccagc
 1380
 agctcatcgg gctccgatga aggcaccgag tactaccccc acctagtctt cttgcagaac
 1440
 aaagctcgcc gagaggactt ctgtcctcgg aagctgcggc agatgcacct gatgattgac
 1500
 cagctcatgg ccactccca cctgcgttac aagggaactc tgtccatggt acaatgcaat
 1560
 gtcttcccg ggttccacc tgacttctg gactctgagg tcaacttatt cctggtagcc
 1620
 ttcatggaca gtgaagcaga gagtgaagac ccaccaagag caggacctgg ttccagccca
 1680
 ctcttctccc tgctgcctgg gtatcgtggc caccacagtt tccagtcctt ggtgagcaag
 1740
 ctccggagcc aagtgatgtc catggcccgg ccacagctgt cacacacgat cctcaccgag
 1800
 aagaactggt tccactacgc tgcccggatc tgggatgggg tgagaaagtc ctctgctctg
 1860
 gcagagtaca gccgcctgct ggcctgaggg caaggagagg aatgtcatgc aggggacctc
 1920
 ctgggtccgc agtgtactgc gagggagcac agatgtccat ccccgctgg ggtggagagc
 1980
 ggcagcaggg ctgatggatg agggatcgtg gcttcccggc ccagagacat gaggtgtcca
 2040
 gggccaggcc cccaccctc agttggggct gttccggggg tgactgt
 2087

<210> 5418

<211> 528

<212> PRT

<213> Homo sapiens

<400> 5418

Met Ala Ala Ile Asp Glu Glu Gly Gly Arg Glu Ile Gly Asp Glu Val
 1 5 10 15
 Asn Ile Leu Val Lys Glu Gln Thr Gln Leu Gly Val Lys Thr Leu Met
 20 25 30
 Arg Leu Leu Lys Glu Pro Glu Lys Glu Arg Asp Ser Asp Ser Asp Phe
 35 40 45
 Ser Pro Leu Gln Gln Thr Glu Gly Cys Gln Arg Arg Asp Lys His Phe
 50 55 60
 Arg His Ala Glu Asn Pro His His Pro Leu Lys Thr Ser Ser Arg Ala

<210> 5416
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 5416
 Xaa Ser Leu Thr Glu Thr Gly Lys Glu Ala Gln Thr Lys Ala Pro Glu
 1 5 10 15
 Arg Ser Pro Arg Pro Leu Trp Phe Pro Glu Pro Gln Leu Glu Val Gly
 20 25 30
 Gly Ala Cys Ser Ala Leu Ala Gln Ser Pro Ser Glu Lys Leu Asp Pro
 35 40 45
 Ala Cys Leu Lys Pro Leu Ser
 50 55

<210> 5417
 <211> 2087
 <212> DNA
 <213> Homo sapiens

<400> 5417
 tccacgcacc tgccatgtgc caggcactaa tccagatgcc ggggatatat ttgtaaacia
 60
 aacctaccac cctcatggat aaagaagggt gagagtgata aaggagactg ttctagataa
 120
 catggtcaga gaaggtctct ctgaagaggt gacttttttag cagagacttg aaggagatga
 180
 gagaataagc catgccagca tctgagatga agagcattcc agacagaaag aacagcaagc
 240
 gcagaggccc tgaggtggcc catatctggc gtgttcaagg agtagccata ggaggccagg
 300
 atggctgcaa ttgatgagga aggagggaga gagataggag atgaagtcaa tatattggtg
 360
 aaggaaacaga cacagttagg ggtcaagact ctcagttagt tactcaagga accagagaaa
 420
 gaacgggact cagactcaga tttctccct cttcagcaga ctgagggatg ccagcgaaga
 480
 gacaagcact tccgtcatgc agaaaacccc catcatcttc tcaaacctc cagcagagcg
 540
 gcccctctgg agaagcccat cgttctcatg aagccacggg aggaggggaa ggggcctgtg
 600
 gccgtgacag gtgcctctac ccctgagggc accgccccac caccctctgc agcccctgcg
 660
 ccacccaagg gggagaagga ggggcagaga cccacacagc ctgtgtacca gatccagaac
 720
 cggggcatgg gcactgccgc accagcagcc atggaccctg tcgtgggtca ggccaaacta
 780
 ctgccccag agcgcagtaa gcacagcatc aagttggtgg atgaccagat gaattggtgt
 840
 gacagtcca tcgagtacct gttggatcag actgatgtgt tgggtggtgg tgtcctgggc
 900
 ctccagggga caggcaagtc catggatcatg tcattgttgt cagccaacac tccagaggag
 960

<212> DNA

<213> Homo sapiens

<400> 5415

ntcagcctta cagagactgg aaaagaagcc caaaccaagg cccagagag gtcccccagg
60
cccccttgggt tccctgagcc tcagctggag gtgggggggtg cctgcagtgc gctggctcag
120
tctccttctg aaaagctgga tccagcttgt ttgaagccct tgagctgac ttagatccgg
180
cgcaggagac caacgcctgc catgctgttc cggctctcag agcactcctc accagaggag
240
gaagcctccc cccaccagag agcctcagga gaggggcacc atctcaagtc gaagagaccc
300
aaccctgtg cctacacacc accttcgctg aaagctgtgc agcgcatcgc tgagtctcac
360
ctgcagtcta tcagcaattt gaatgagaac caggcctcag aggaggagga tgagctgggg
420
gagcttcggg agctgggtta tccaagagag gaagatgagg aggaagagga ggatgatgaa
480
gaagaggaag aagaagagga cagccaggct gaagtcctga aggtcatcag gcagtctgct
540
gggcaaaaga caacctgtgg ccagggtctg gaagggccct gggagcgccc acccctctg
600
gatgagtcgg agagagatgg aggctctgag gaccaagtgg aagaccagc actaagtga
660
cctggggagg aacctcagcg cccttcccc tctgagcctg gcacataggc acccagcctg
720
catctcccag gaggaagtgg aggggacatc gctgttcccc agaaacccac tctatcctca
780
ccctgttttg tgctcttccc ctgcctgct agggctgcgg cttctgactt ctagaagact
840
aaggctggtc tgtgtttgct tgtttgccca cctttggctg ataccagag aacctgggca
900
cttgctgcct gatgccacc cctgccagtc attcctccat tcaccagcg ggaggtggga
960
tgtgagacag cccacattgg aaaatccaga aaaccgggaa cagggatctg cccttcacaa
1020
ttctactccc cagatcctct ccctggaca caggagaccc acagggcagg accctaagat
1080
ctggggaaag gaggtcctga gaacctgag gtacccttag atccttttct acccacttcc
1140
ctatggagga ttccaagtca ccacttctct caccggcttc taccagggtc caggactaag
1200
gcgtttttct ccatagcctc aacatttttg gaatcttccc ttaatcacc ttgctcctcc
1260
tgggtgcctg gaagatggac tggcagagac ctctttgttg cgttttgtgc tttgatgcca
1320
ggaatgccgc ctagtattatg tccccggtag ggcacacagc ggggggcgcc aggttttctc
1380
tgtccccag ctgctctgcc cctttccctt tcttcctga ctccaggcct gaaccctcc
1440
cgtgctgtaa taaatctttg taaataaaaa aaaaaaaaaa aaaaaaaaaa aaa
1493

20 25 30
 Ile Cys Ala Asn Ser Pro Ile Lys Ala Gln Gln Asp Gln Leu Gln Val
 35 40 45
 Lys Asn Asn Ile Lys Ala Ser Leu His Asn Val Lys Ser Ser Leu Pro
 50 55 60
 Leu Phe Asn Thr Lys Ser Ser Thr Ser Val Gly Gln Leu Gln Ser Pro
 65 70 75 80
 Thr Leu Asn Ser Pro Ile Tyr Met Gln Lys Gln Gly Lys Asn Glu His
 85 90 95
 Leu Ala Phe Asn Thr Lys Ser Lys Ala Ser Thr Val Gly Ser Glu Leu
 100 105 110
 Val Leu Val Ser Thr Thr Val Pro Thr Val His His Val Ser Asp Leu
 115 120 125
 Glu Met Ser Ser Thr Leu Asp Cys Leu Pro Val Leu Ala Asp Trp Glu
 130 135 140
 Asp Val Val Leu Leu Pro Ala Ser Gln Pro Glu Glu Asn Val Asp Cys
 145 150 155 160
 Thr Val Pro Ile Ser Asp Ser Asp Leu Glu Ile Ser Phe Asn Ser Gly
 165 170 175
 Glu Arg Leu Met Val Leu Lys Glu Leu Glu Met Ser Ser His Glu Asn
 180 185 190
 Phe Gly Asp Ile Glu Glu Thr Pro Gln Lys Ser Glu Thr Ser Lys Ser
 195 200 205
 Ile Val Tyr Lys Ser Pro His Thr Thr Ile Tyr Asn Val Lys Glu Ala
 210 215 220
 Lys Asp Pro Gly Ser Asp Ile Ser Ala Phe Lys Leu Pro Glu His Lys
 225 230 235 240
 Ser Ser Thr Phe Asn Arg Val Asn Ala Asn Met Ser His Pro Leu Val
 245 250 255
 Leu Gly Lys His Pro Leu Leu Ser Gly Gly Thr Lys Arg Asn Pro Cys
 260 265 270
 Ser Pro Gln Ala Phe Pro Pro Ala Lys Lys Gln Pro Phe Thr Ile His
 275 280 285
 Glu Glu Lys Pro Thr Ser Ser Asp Cys Ser Pro Val Arg Ser Ser Ser
 290 295 300
 Trp Arg Arg Leu Pro Ser Ile Leu Thr Ser Thr Val Asn Leu Gln Glu
 305 310 315 320
 Pro Trp Lys Ser Gly Lys Met Thr Pro Pro Leu Cys Lys Cys Gly Arg
 325 330 335
 Arg Ser Lys Arg Leu Val Val Ser Asn Asn Gly Pro Asn His Gly Lys
 340 345 350
 Val Phe Tyr Cys Cys Pro Ile Gly Lys Tyr Gln Glu Asn Arg Lys Cys
 355 360 365
 Cys Gly Tyr Phe Lys Trp Glu Gln Thr Leu Gln Lys Glu Arg Ala Asn
 370 375 380
 Ser Met Val Pro Ser His Ser Thr Gly Gly Leu Thr Phe Ser Ser Pro
 385 390 395 400
 Glu Thr Ser His Ile Cys Asp Arg Asn Leu Ser Ile Ser Thr Lys Asn
 405 410 415
 Ser Leu Arg Leu Arg Pro Ser Met Arg Asn
 420 425

<210> 5415

<211> 1493

ataataaatc ctcatgaaaa agttcaaatg aagtcaattt gtgcaaattc tcctataaag
 420
 gcacaacagg atcaattaca agtaaaaaac aatataaaag caagtcttca caatgtcaaa
 480
 agttccttac ctctttttta tactaagtcc tctacttctg tggggcagtt gcagtctcct
 540
 accttgaatt cacctatcta tatgcaaaag caaggaaaaa atgaacatct tgcatttaat
 600
 accaaatcta aggettcaac agttggttca gaattggtac ttgtttctac caccgttcca
 660
 actgttcac atgtttctga tttggaaatg agctctactc tggactgttt acctgtgttg
 720
 gctgattggg aggatgtggt tttactgccg gcctctcagc ctgaggaaaa cgtagactgt
 780
 acagttccca ttagtgactc agacttagag atttcattta attctggaga aagattaatg
 840
 gttttgaaag aattggaaat gtcaagtcac gaaaactttg gagacataga ggaaactcct
 900
 caaaaatctg agacttctaa gtctattgtg tacaagagtc ctacactac tatttataat
 960
 gtaaaagaag ccaaagatcc aggttcagat atttctgcct ttaagttacc tgaacacaaa
 1020
 tcaagtacct tcaacagagt taatgccaat atgtctcacc ctttagtttt ggggaaacat
 1080
 cctcttcttt caggtggtac caaaaggaat ccatgcagtc cccaagcttt cccaccagca
 1140
 aaaaaacaac ctttactat tcatgaagaa aagcctacat catctgattg ctccccagta
 1200
 agaagttctt cctggaggcg tctcccatct atattaactt ctacagttaa cctacaagag
 1260
 ccatggaaga gtgggaaaat gacacctcca ttatgcaagt gtggtcggag atctaagaga
 1320
 cttgttgttt ctaataatgg accgaaccat ggaaaagtct tctattgttg ccctatcggg
 1380
 aaataccaag aaaacagaaa atgttgtggt tatttcaaat gggaacaaac acttcaaaag
 1440
 gaaagagcca acagcatggt tccatctcat tccacagggg gactcacttt tagttctcca
 1500
 gaaacaagcc atatttgtga cagaaattta agtatttcca ccaaaaattc tttgagactc
 1560
 aggccttcaa tgaggaattg ataacctttc atgtatgaat cctaattgtt ccttgaattt
 1620
 ccaaacatga gtattctgat aacatcttac actattttat ttttatttta tatatta
 1677

<210> 5414

<211> 426

<212> PRT

<213> Homo sapiens

<400> 5414

Met Ser Ala Cys Asn Ile Ser Ile Gln Gly Pro Ser Ile Tyr Asn Lys
 1 5 10 15
 Glu Pro Lys Asn Ile Ile Asn Pro His Glu Lys Val Gln Met Lys Ser

370 375 380
 Glu Gln Val Ile Asn Asn Ile Leu Glu Glu Arg Leu Ala Pro Thr Leu
 385 390 395 400
 Ser Gln Leu Asp Arg Asn Leu Asp Arg Glu Met Lys Pro Asp Pro Thr
 405 410 415
 Pro Leu Leu Thr Ser Arg His Asn Val Phe Gln Asn Asp Glu Phe Asp
 420 425 430
 Val Phe Ser Arg Asp Ser Val Asp Leu Ser Arg Val His Lys Gly Lys
 435 440 445
 Ser Thr Arg Lys Glu Glu Asn Thr Arg Ser Leu Leu Asn Asp Lys Arg
 450 455 460
 Ala Val Ala Ala Gln Arg Gln Arg Tyr Glu Gln Tyr Ser Val Val Val
 465 470 475 480
 Glu Glu Val Pro Leu Gln Pro Gly Glu Ser Leu Pro Tyr His Ser Val
 485 490 495
 Tyr Tyr Glu Asp Glu Tyr Asp Asp Thr Tyr Asp Gly Asn Gln Val Gly
 500 505 510
 Ala Asn Asp Ala Asp Ser Met Thr Ser Ser Ser Ala Ala Gly His Ser
 515 520 525
 Pro Ser Gln Val Leu Arg Thr Lys Val Pro Arg Glu Gly Gln Glu Glu
 530 535 540
 Asp Asp Asp Asp Glu Glu Asp Asp Ala Asp Glu Glu Ala Pro Lys Pro
 545 550 555 560
 Asp His Phe Val Gln Asp Pro Ala Val Leu Arg Glu Lys Ala Glu Ala
 565 570 575
 Arg Arg Met Ala Phe Leu Ala Lys Lys Gly Tyr Arg His Asp Ser Ser
 580 585 590
 Thr Ala Val Ala Gly Ser Pro Arg Gly His Gly Gln Ser Arg Glu Thr
 595 600 605
 Thr Gln Glu Arg Arg Lys Lys Glu Ala Asn Lys Ala Thr Arg Ala Asn
 610 615 620
 His Asn Arg Arg Thr Met Ala Asp Arg Lys Arg Ser Lys Gly Met Ile
 625 630 635 640
 Pro Ser

<210> 5413

<211> 1677

<212> DNA

<213> Homo sapiens

<400> 5413

agagatgggt gtgtaatgaa aattacaagg tcgttgaaca aggttagtag tgtcttgcct
 60
 ttttattctg tcatctcaaa cttcataaac agtcatacgt tctttgaaac gtagatttaa
 120
 tgtgtgcagt catttataaa tcaatgacat ttctcttttt tgtcataaaa ctgtatactg
 180
 aagaaattaa cgaatgcaca gtttctaaag ctgttgcatt tgtctgtgga atcataggtt
 240
 cccactaaga agaatttcag cattctggcc agaaatttga atacaattca agttgaagaa
 300
 atgtctgcct gtaacattag catccagggt cccagcatat ataataagga gcctaaaaat
 360

<210> 5412

<211> 642

<212> PRT

<213> Homo sapiens

<400> 5412

```

Met Gln Lys Arg Leu His Arg Ser Val Phe Leu Thr Phe Leu Arg Met
 1           5           10           15
Ser Thr His Lys Glu Ser Lys Asp His Phe Ile Ser Pro Ser Ala Phe
      20           25           30
Gly Glu Ile Leu Tyr Asn Asn Phe Leu Phe Asp Ile Pro Lys Ile Leu
      35           40           45
Asp Leu Cys Val Leu Phe Gly Lys Gly Asn Ser Pro Leu Leu Gln Lys
      50           55           60
Met Ile Gly Asn Ile Phe Thr Gln Gln Pro Ser Tyr Tyr Ser Asp Leu
      65           70           75           80
Asp Glu Thr Leu Pro Thr Ile Leu Gln Val Phe Ser Asn Ile Leu Gln
      85           90           95
His Cys Gly Leu Gln Gly Asp Gly Ala Asn Thr Thr Pro Gln Lys Leu
      100          105          110
Glu Glu Arg Gly Arg Leu Thr Pro Ser Asp Met Pro Leu Leu Glu Leu
      115          120          125
Lys Asp Ile Val Leu Tyr Leu Cys Asp Thr Cys Thr Thr Leu Trp Ala
      130          135          140
Phe Leu Asp Ile Phe Pro Leu Ala Cys Gln Thr Phe Gln Lys His Asp
      145          150          155          160
Phe Cys Tyr Arg Leu Ala Ser Phe Tyr Glu Ala Ala Ile Pro Glu Met
      165          170          175
Glu Ser Ala Ile Lys Lys Arg Arg Leu Glu Asp Ser Lys Leu Leu Gly
      180          185          190
Asp Leu Trp Gln Arg Leu Ser His Ser Arg Lys Lys Leu Met Glu Ile
      195          200          205
Phe His Ile Ile Leu Asn Gln Ile Cys Leu Leu Pro Ile Leu Glu Ser
      210          215          220
Ser Cys Asp Asn Ile Gln Gly Phe Ile Glu Glu Phe Leu Gln Ile Phe
      225          230          235          240
Ser Ser Leu Leu Gln Glu Lys Arg Phe Leu Arg Asp Tyr Asp Ala Leu
      245          250          255
Phe Pro Val Ala Glu Asp Ile Ser Leu Leu Gln Gln Ala Ser Ser Val
      260          265          270
Leu Asp Glu Thr Arg Thr Ala Tyr Ile Leu Gln Ala Val Glu Ser Ala
      275          280          285
Trp Glu Gly Val Asp Arg Arg Lys Ala Thr Asp Ala Lys Asp Pro Ser
      290          295          300
Val Ile Glu Glu Pro Asn Gly Glu Pro Asn Gly Val Thr Val Thr Ala
      305          310          315          320
Glu Ala Val Ser Gln Ala Ser Ser His Pro Glu Asn Ser Glu Glu Glu
      325          330          335
Glu Cys Met Gly Ala Ala Ala Val Gly Pro Ala Met Cys Gly Val
      340          345          350
Glu Leu Asp Ser Leu Ile Ser Gln Val Lys Asp Leu Leu Pro Asp Leu
      355          360          365
Gly Glu Gly Phe Ile Leu Ala Cys Leu Glu Tyr Tyr His Tyr Asp Pro

```

cccgaggccg aagacatcag cttgctgcag caggcctcat cagtcttgga cgagacgcgg
1260
actgcctaca tcctccaggc agtcgagagt gcatgggaag gggaggacag acggaaagcc
1320
acagatgcta aagacccatc ggtgattgag gaggcctaag gggagcctaa cggggtcacg
1380
gtgacagcag aggcagtcag tcaagcatca tcacatccgg agaactcgga ggaagaggag
1440
tgcaggggag cagccgcggc tgtgggacct gccatgtgtg gggagggaact ggactctctc
1500
atctcccaag tgaaggacct gctgccagac cttggtgagg gcttcatcct ggctgcctg
1560
gagtactacc actacgaccc agagcaggtg atcaacaata tcctggagga gcggctggcc
1620
cccaccctca gccagctgga ccgcaaccta gacagagaaa tgaaaccaga ccctacaccc
1680
ctgctgacgt ctgcgccaaa cgtcttccag aatgacgagt ttgatgtgtt cagcagggac
1740
tcagtagacc tgagccgggt gcacaagggc aagagcacca ggaaggagga aaacacgcgg
1800
agtttgctga acgacaagcg tgcagtggcg gcacagcggc agcgctacga gcagtacagc
1860
gtggtgggtg aggaggtgcc actgcagcca ggcgagagcc tgccctacca cagtgtctac
1920
tacgaggatg agtacgatga cacatacgat ggcaaccagg tgggcgcaa tgatgcagac
1980
tctatgacga gctcatcagc cgcaggccat tcaccatccc aggtgctgag aaccaaagt
2040
cctagagaag ggcaggagga ggtgacgac gatgaggaag acgatgctga cgaggaggct
2100
cccaagcccg accattttgt tcaggacct gcagtgtga gagagaaggc agaagccagg
2160
cgcatggcct ttctcgcaa gaaagggtag cggcatgaca gctcaacagc agtggccggc
2220
agcccccgag gccatgggca gagccgcgag acaaccagg aacgcaggaa gaaggaagcc
2280
aacaaggcga caagagccaa ccacaaccgg agaaccatgg ccgaccgcaa gaggagcaaa
2340
ggcatgatcc catcctgaga cctggtgcag ggccagtggg gaggcagcgg caccagactc
2400
accaggccgc gctcccatcg cctggggcct cctcactagg ggccccaagt tcaactcaac
2460
ccctcaacag cctcagcttt gcagccctg agaaggccgc ctctcatcta ccagccagcc
2520
atgagcgct tcctgcagaa cacacagtgc cttatgccac agccgaagaa tccgtggggc
2580
cggcaagcag gcaccttccc ccagctgcgc tagcgggaaa gagatgggga tggagtccca
2640
aggcaagcgc cccaaacctc gggccacaag acaccacttc ccctttaccc tggacagcag
2700
gaaacctgta tattcaaaaa caaaaaaagt cctgctaata aaatttttga ccctttcaaa
2760
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
2802

145 150 155 160
 Asp Asp Val Phe Asn Cys Asn Leu Ser Pro Arg Ser Ser Leu Thr Glu
 165 170 175
 Pro Leu Leu Ala Glu Leu Pro Phe Pro Ser Val Leu Glu Ser Glu Glu
 180 185 190
 Thr Pro Asn Gln Phe Ile
 195

<210> 5411

<211> 2802

<212> DNA

<213> Homo sapiens

<400> 5411

nccaggtaaa tctgaggaac ttccccaagc ctttatttgc acccggtaaa tccaataata
 60
 ccaattttga ttttaaattgg gaggggggtc cttgcaggcc ccacatgaga ggggtggcct
 120
 tgaagaattc cttgggggtac ccacaggctt accagtttgg aaactcgcca ccccgagcag
 180
 aaggcagccc ggtattttgt gttatacaaa ccgcccccta aagacaacat tcccgccta
 240
 gtggaggagt acctggaacg cgccaccttc gtagccaatg acctcgactg gctcctggcc
 300
 ttgcctcagc ataaattctg gtgccagggtg atctttgacg agactctaca gaagtgcctg
 360
 gactcctacc tgcgctatgt ccccgcaaa ttcgacgagg ggggtggcctc agcccctgag
 420
 gttgttgaca tgcagaagcg cctccatcga agtgttttcc tcaccttcc cgcgatgtcc
 480
 actcacaagg aatccaaaga tcacttcatt tccccttctg cgtttggaga aatcctctac
 540
 aataacttcc tctttgacat tccaaagatc ctggacctct gcgtgctctt tggaaaaggc
 600
 aactcaccac tgctccagaa gatgatagga aacatcttta cacagcagcc aagttactac
 660
 agtgacctgg atgaaaccct gcctaccatc cttcagggtc tcagcaatat cctccagcac
 720
 tgtggtttgc aaggggacgg ggccaatacc acaccccaga agcttgagga gaggggcccga
 780
 ttgaccccca gtgacatgcc tctcctggaa ttaaaggaca ttgttctcta cctttgtgat
 840
 acctgcacca cactttgggc ctttctggat atcttccctt tggttgcca gaccttccag
 900
 aagcagcact tttgttacag actagcttcc ttctacgaag cagcaattcc cgaaatggag
 960
 tctgcaatta agaagaggag gcttgaagat agcaagcttc ttggtgacct gtggcagagg
 1020
 ctctcccatt ccaggaagaa gctaattggag attttccaca tcactcctgaa ccagatctgc
 1080
 ctcttccca tccagaaaag cagctgtgac aacattcagg gcttcatcga agagttcctt
 1140
 cagatcttca gtccttgct gcaggagaag aggttccctc gggactatga tgcactcttc
 1200

caaaagaggc tctgtcagag atgatctggg tgacagattg cagttaaaaa catcatctat
 1260
 tgaacctctg gaagttacac tgaactttcg gtcagagaaa ctgctccttc ggattaaagg
 1320
 ctcaactcatt ttttccagaa ataacttaat cgtctccttc ttttctggac ttgtacttga
 1380
 caaattcaga acttttccat ttactttttac aacggaatta ctgagcccaa accaatagaa
 1440
 gaaatcaa atgcatcag ctttgaattc atatgcaaag cttaaatttt ctccattaac
 1500
 cacttcattt cctgggggga agaaattctt cactgcctct tgaaaatcaa actgaaagag
 1560
 agaggaacat tgcattgact gaagccggta actttctcca atcactgagg agatgaccat
 1620
 gtccatccct tgctctatct gtcttcttat cttgggggtgc ctctgtgtta caagaaacgc
 1680
 gtacgtcctt tcttttgagg tgtctttttt ggtctgtaca ttaataaaga acaacattgg
 1740
 tttgctcaat atagtttccc tgtagtcttt ataatacacag tagttgggtca gttccacata
 1800
 cctcttgatg tagtctgta ggcggtagag ctgcccgtcg aggcgcacga ggccgtcacc
 1860
 gaagacgttg aagccccccc gcgcgcgcgc cggctccccg ggcccgccca ccacgagctg
 1920
 gtcgccgtc agctggaagg caccgggctg caggcgcagc agctgagcca gcggcagcag
 1980
 ggccagctcg cagtcgcagg tccacaggct gcgaagctt
 2019

<210> 5410

<211> 198

<212> PRT

<213> Homo sapiens

<400> 5410

Met	Leu	Phe	Phe	Ile	Asn	Val	Gln	Thr	Lys	Lys	Asp	Thr	Ser	Lys	Glu
1				5					10					15	
Arg	Thr	Tyr	Ala	Phe	Leu	Val	Asn	Thr	Arg	His	Pro	Lys	Ile	Arg	Arg
			20					25					30		
Gln	Ile	Glu	Gln	Gly	Met	Asp	Met	Val	Ile	Ser	Ser	Val	Ile	Gly	Glu
		35					40					45			
Ser	Tyr	Arg	Leu	Gln	Ser	Met	Gln	Cys	Ser	Ser	Leu	Phe	Gln	Phe	Asp
	50					55					60				
Phe	Gln	Glu	Ala	Val	Lys	Asn	Phe	Phe	Pro	Pro	Gly	Asn	Glu	Val	Val
65				70					75					80	
Asn	Gly	Glu	Asn	Leu	Ser	Phe	Ala	Tyr	Glu	Phe	Lys	Ala	Asp	Ala	Leu
			85					90					95		
Phe	Asp	Phe	Phe	Tyr	Trp	Phe	Gly	Leu	Ser	Asn	Ser	Val	Val	Lys	Val
		100					105					110			
Asn	Gly	Lys	Val	Leu	Asn	Leu	Ser	Ser	Thr	Ser	Pro	Glu	Lys	Lys	Glu
		115				120					125				
Thr	Ile	Lys	Leu	Phe	Leu	Glu	Lys	Met	Ser	Glu	Pro	Leu	Ile	Arg	Arg
	130					135					140				
Ser	Ser	Phe	Ser	Asp	Arg	Lys	Phe	Ser	Val	Thr	Ser	Arg	Gly	Ser	Ile

275	280	285
Ala Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys Ile Met Cys Val		
290	295	300
Ala Gly Ile Gly Leu Val Val Leu Phe Phe Ser Trp Met Leu Ser Ile		
305	310	315
Phe Arg Ser Lys Tyr His Gly Tyr Pro Tyr Ser Phe Leu Met Ser		
325	330	335

<210> 5409

<211> 2019

<212> DNA

<213> Homo sapiens

<400> 5409

```

ttttgaagcc tcagtcataa atttaatacaa ttctagggtg aatgctaaga aaagttttaa
60
ttgtgcaaat gtggtacata acatttcaaa tataagtgga aggatcatca gtagtggtat
120
caaaatgcat aatacagaaa ctttttaaga aaggataaaa aattacactc aggaccata
180
actcttcctc attataagca tatgtagtga ttcattcatg cagggtttta tatgtagata
240
ggattttttt ttccttttca agaattccat tntagccatg agatgaaaaa tgtattatgg
300
taatggata gctttcttct attttgcttt tagtgtagg tttgctaaaa gcttatttaa
360
aattcccaac tgacataatg tgttttcaat aaggaggacg ctgccgtgtc caataccctt
420
cccctgtcat tgttcggtac catatctcct ggcttccttc tacatgggtc acttagttaa
480
gaggagggcc aaggaggttc cgatttcagg cagtgtgtgg cagggttact gtcctagcaa
540
cctggctact cctcactgtg aacgtttctc atagggtgtca tatggcagga tgaaaaacat
600
atttgcttcc cagtgaaga tggcacaggc ttttgcccag ccagggtggc aagagaacag
660
aactcttaac cccttgctcg acaggtttga gttcaagggg ttggatgctc caagcagagg
720
gccaaaccct gatttatgaa gcatgctagg tcaacagcca gtcagaccac tcccacaaag
780
gctgccacaa aaactcccag ggaactgaga aaaatgttca ggggtggcaga actctgtggc
840
ccttctgctt ctttgagaaa gtgttcaaag tagagaatat ccccagccc caccagtgc
900
catgggacca aggcctttcc atcctggtaa tcataagttt taggggaatc agctgcctg
960
ggcctgccag ggcatcacat ccacagaagc agaagagagg agtcctccat agaagccatg
1020
gaggagccgg agattgacac gcagggtgaa gtatctgctt cccacctctt accctccccg
1080
cagcctatag tctagcacag gcctggagtg cgggagcaac tgctacaatg ttcagttcaa
1140
tcagataaat tggttgggtg tctcttcaga ttccagaaca cttggaaatg gtaattctgc
1200

```


gaatgacaat tttttgtatt tgctttttct ccctttaaga gcacattctt ctgtaaggag
 1740
 aaaggcagca ttctggctaa aatgtgtaga aggtaattta ctacatttat aaaatagtgt
 1800
 gacttttgtg aaaattttga attagctttc atatgaagtg ccttaagtag actcttcatt
 1860
 tacttttctg gtaatggttt aaatatcatt tggtatgcat ttttaagata cagttcagaa
 1920
 tgacacattg tagtggcaaa gataaccaaa tgtctggctg tttgcttttt gaccatatca
 1980
 ataaactttt acaatctaaa aaaaaaaaaa
 2010

<210> 5408

<211> 335

<212> PRT

<213> Homo sapiens

<400> 5408

Met	Ala	Ala	Arg	Trp	Arg	Phe	Trp	Cys	Val	Ser	Val	Thr	Met	Val	Val
1			5						10					15	
Ala	Leu	Leu	Ile	Val	Cys	Asp	Val	Pro	Ser	Ala	Ser	Ala	Gln	Arg	Lys
			20					25					30		
Lys	Glu	Met	Val	Leu	Ser	Glu	Lys	Val	Ser	Gln	Leu	Met	Glu	Trp	Thr
		35					40					45			
Asn	Lys	Arg	Pro	Val	Ile	Arg	Met	Asn	Gly	Asp	Lys	Phe	Arg	Arg	Leu
		50				55					60				
Val	Lys	Ala	Pro	Pro	Arg	Asn	Tyr	Ser	Val	Ile	Val	Met	Phe	Thr	Ala
65					70					75					80
Leu	Gln	Leu	His	Arg	Gln	Cys	Val	Val	Cys	Lys	Gln	Ala	Asp	Glu	Glu
			85						90					95	
Phe	Gln	Ile	Leu	Ala	Asn	Ser	Trp	Arg	Tyr	Ser	Ser	Ala	Phe	Thr	Asn
			100					105					110		
Arg	Ile	Phe	Phe	Ala	Met	Val	Asp	Phe	Asp	Glu	Gly	Ser	Asp	Val	Phe
		115					120					125			
Gln	Met	Leu	Asn	Met	Asn	Ser	Ala	Pro	Thr	Phe	Ile	Asn	Phe	Pro	Ala
		130				135					140				
Lys	Gly	Lys	Pro	Lys	Arg	Gly	Asp	Thr	Tyr	Glu	Leu	Gln	Val	Arg	Gly
145					150					155				160	
Phe	Ser	Ala	Glu	Gln	Ile	Ala	Arg	Trp	Ile	Ala	Asp	Arg	Thr	Asp	Val
			165					170					175		
Asn	Ile	Arg	Val	Ile	Arg	Pro	Pro	Asn	Tyr	Ala	Gly	Pro	Leu	Met	Leu
			180					185					190		
Gly	Leu	Leu	Leu	Ala	Val	Ile	Gly	Gly	Leu	Val	Tyr	Leu	Arg	Arg	Ser
		195					200					205			
Asn	Met	Glu	Phe	Leu	Phe	Asn	Lys	Thr	Gly	Trp	Ala	Phe	Ala	Ala	Leu
		210				215					220				
Cys	Phe	Val	Leu	Ala	Met	Thr	Ser	Gly	Gln	Met	Trp	Asn	His	Ile	Arg
225					230					235				240	
Gly	Pro	Pro	Tyr	Ala	His	Lys	Asn	Pro	His	Thr	Gly	His	Val	Asn	Tyr
			245					250					255		
Ile	His	Gly	Ser	Gln	Ala	Gln	Phe	Val	Ala	Glu	Thr	His	Ile	Val	
			260				265					270			
Leu	Leu	Phe	Asn	Gly	Gly	Val	Thr	Leu	Gly	Met	Val	Leu	Leu	Cys	Glu

atggtggtgg cgctgctcat cgtttgcgac gttccctcag cctctgcca aagaaagaag
120
gagatggtgt tatctgaaaa ggtagtcag ctgatggaat ggactaaca aagacctgta
180
ataagaatga atggagacaa gttccgctgc cttgtgaaag cccaccgag aaattactcc
240
gttatcgta tgttcaactg tctccaactg catagacagt gtgtcgtttg caagcaagct
300
gatgaagaat tccagatcct ggcaaaactcc tggcgatact ccagtgcatt caccaacagg
360
atattttttg ccatggtgga ttttgatgaa ggctctgat tatttcagat gctaaacatg
420
aattcagctc caactttcat caactttcct gcaaaaggga aacccaaacg gggtgataca
480
tatgagttac aggtgcgggg ttttcagct gacgagattg cccggtggat cgccgacaga
540
actgatgtca atattagagt gattagacct ccaaattatg ctgggtcccct tatgttggga
600
ttgcttttgg ctgttattgg tggacttgtg tatcttcgaa gaagtaatat ggaatttctc
660
tttaataaaa ctggatgggc ttttgcagct ttgtgttttg tgcctgctat gacatctggt
720
caaatgtgga accatataag aggaccacca tatgccata agaatcccca cacgggacat
780
gtgaattata tccatggaag cagtcaagcc cagttttag ctgaaacaca cattgttctt
840
ctgtttaatg gtggagtac cttaggaatg gtgcttttat gtgaagctgc tacctctgac
900
atggatattg gaaagcgaaa gataatgtgt gtggctggtg ttggacttgt tgtattatc
960
ttcagttgga tgctctctat ttttagatct aaatatcatg gctaccata cagctttctg
1020
atgagttaaa aaggtcccag agatatatag aactggagt actggaaatt gaaaaacgaa
1080
aatcggtgtg gtttgaaaag aagaatgcaa cttgtatatt ttgtattacc tcttttttc
1140
aagtgattta aatagttaat catttaacca aagaagatgt gtagtgcctt aacaagcaat
1200
cctctgtcaa aatctgaggt atttgaaaat aattatcctc ttaaccttct cttcccagtg
1260
aactttatgg aacatttaat ttagtacaat taagtatatt ataaagatac tatgactgcc
1320
acctgccatt taccttctaa taacctgcc atgtgggttg cagaaagaga tggatatagt
1380
agcctcagaa gaaatatttt atgtgggttt tttgttttgc gttactagat ttcattggtg
1440
aggggatatg gttgacctt tactttttaa tggagcagcc agtttttgtt aattactcac
1500
ttgtaaatg tgagattctg aattccttac ctgctattct tgtactgtc tcaggccaaa
1560
tctatgctgt ggttcttatg agacttgtat gaagatgccc tgatttgtac agattgacca
1620
cgggaatact actgccatgt aatctgtata gttccagata atttgtcatg aacattgaca
1680

<210> 5406
 <211> 291
 <212> PRT
 <213> Homo sapiens

<400> 5406
 Ile Leu Ala Glu Leu Glu Ala Asn Val Pro Gly Ala Gln Val Leu Gly
 1 5 10 15
 Asn Gln Ile Met Pro Gly Phe Leu Asn Met Lys Ile Lys Phe Val Cys
 20 25 30
 Ala Gln Cys Leu Arg Asn Gly Gln Val Ile Glu Pro Asp Lys Asn Arg
 35 40 45
 Lys Tyr Cys Ser Ala Lys Ala Arg His Ser Trp Thr Lys Asp Arg Arg
 50 55 60
 Ala Met Arg Val Met Ser Ile Glu Arg Lys Lys Trp Met Asn Ile Arg
 65 70 75 80
 Pro Leu Pro Thr Lys Lys Gln Met Pro Leu Gln Phe Asp Leu Cys Asn
 85 90 95
 His Ile Ala Ser Gly Lys Lys Cys Gln Tyr Val Gly Asn Cys Ser Phe
 100 105 110
 Ala His Ser Pro Glu Glu Arg Glu Val Trp Thr Tyr Met Lys Glu Asn
 115 120 125
 Gly Ile Gln Asp Met Glu Gln Phe Tyr Glu Leu Trp Leu Lys Ser Gln
 130 135 140
 Lys Asn Glu Lys Ser Glu Asp Ile Ala Ser Gln Ser Asn Lys Glu Asn
 145 150 155 160
 Gly Lys Gln Ile His Met Pro Thr Asp Tyr Ala Glu Val Thr Val Asp
 165 170 175
 Phe His Cys Trp Met Cys Gly Lys Asn Cys Asn Ser Glu Lys Gln Trp
 180 185 190
 Gln Gly His Ile Ser Ser Glu Lys His Lys Glu Lys Val Phe His Thr
 195 200 205
 Glu Asp Asp Gln Tyr Cys Trp Gln His Arg Phe Pro Thr Gly Tyr Phe
 210 215 220
 Ser Ile Cys Asp Arg Tyr Met Asn Gly Thr Cys Pro Glu Gly Asn Ser
 225 230 235 240
 Cys Lys Phe Ala His Gly Asn Ala Glu Leu His Glu Trp Glu Glu Arg
 245 250 255
 Arg Asp Ala Leu Lys Met Lys Leu Asn Lys Ala Arg Lys Asp His Leu
 260 265 270
 Ile Gly Pro Asn Asp Asn Asp Phe Gly Lys Tyr Ser Phe Leu Phe Lys
 275 280 285
 Asp Leu Asn
 290

<210> 5407
 <211> 2010
 <212> DNA
 <213> Homo sapiens

<400> 5407
 ataaaaggga gaggagcgaa catggcagcg cggtggcggt tttggtgtgt ctctgtgacc
 60

atattggcag aattggaagc aaatgtacct ggagcgcagg tacttggttaa tcaaataatg
60
cctggatttc ttaatatgaa gataaagttt gtgtgcgccc agtgtctgag aaacggtcaa
120
gtcattgaac cagacaaaaa cagaaaatat tgtagtgcaa aagcaaggca ttcgtggacc
180
aaagaccggc gtgcgatgag agtgatgtct attgaacgta agaagtggat gaacatccgt
240
cctctcccca caaagaaaca aatgccttta cagtttgatc tgtgcaacca tattgcttct
300
gggaaaaaat gtcaatatgt gggaaactgt tcctttgctc atagtctga ggaaagagaa
360
gttttgactt acatgaagga gaatgggata caagatatgg agcaatttta cgaactatgg
420
ctcaagagtc aaaaaaatga aaaaagtga gacatagcca gtcagtcaaa caaggaaaat
480
ggaaaacaaa ttcacatgcc aacagattat gctgaagtta cagtggactt tcactgctgg
540
atgtgtggga aaaactgcaa cagtgagaag cagtggcagg gccacatctc ctccgagaag
600
caciaagaga aggttttcca caccgaggac gaccagtact gctggcagca ccgcttccca
660
acaggetatt tcagtatttg tgataggtat atgaatggca cctgcccaga aggaaacagc
720
tgtaaatttg cacatggaaa tgccgaactt catgaatggg aagaaagaag agatgcccta
780
aagatgaagc tcaacaaagc acgaaaagat cacttaattg gcccaaatga taatgacttt
840
ggaaaaatata gttttttgtt taaagattta aactaatatg ctggctttta tgtatgatac
900
ctaactcagag cattgaccag aaaaattgaa agtgttctga ggcacatagc agaggagctg
960
cagatttcct gcttgatttg gcgtatatcg ttcctctga gcagcaaccc acagtaggta
1020
ggaaaaatggg ctgtttcaca ggcttgcca cgctctcacg gaaccactgg catcagatgg
1080
tgaagtgact gctaccoggt tgccatctgt tgaacagact tttggatgaa gtgtgttggg
1140
gaaggagata aggttatatc taggacaact ctttgagttg gtccttcata taagaatcgt
1200
gacggtaaga gaataaacac ttgtactggg atcagaatac atgatggatg aaattcttta
1260
catgttttag cagaatgaat ttgtttaata taataaagtt tgctacttat ctgtatgtag
1320
gttgctaaaa aggattttct taactcagat tttaagccaa ataaccattt aacactagta
1380
tttgttaaat ggggtatttt tctgtatttg tatgtttcac tataataagg gaattaagga
1440
taatgtgcat tgagaatatt ttgaaaaata attgactcaa attttatttc ttggtctttt
1500
gctgttttaa tgatgatttt gaaagattaa acctgtactg ttggtattgt gttagtgtat
1560
ggaccaatac tgctgtaat aaagatttta tatataaaaa aaaaaaaaaa
1609

<212> DNA

<213> Homo sapiens

<400> 5403

gcgccttccc cctcgacggc gccagctcct cggcctctag ctccaggatg tgctcgctccg
 60
 cacgcgctag ttcgcgctgc tggatcaggc tcaggatctc cagcactgac aatggctcct
 120
 tcattctttgg gggctctggg accttgggtg ggggctctgg agctgcctcg cctgcaggca
 180
 ccactctctc agccaggggac gcacgctggg gctntggatc cagcctccag tctcaggaag
 240
 gccagtctcc gggcggcctc ccccgtgcc tctcgctgc cgtgggctcg ggtcccatgc
 300
 agccggggcca ggaggccaaa atctgctgag ctctgcgta tccctggtac cagcacacgg
 360
 cccaagaaag agcggggctg cccatcccca gggctgcctg ccgccggccc gggggccagc
 420
 ccagccggaa gggggccagg cccgcaagct t
 451

<210> 5404

<211> 150

<212> PRT

<213> Homo sapiens

<400> 5404

Ala	Pro	Ser	Pro	Ser	Thr	Ala	Pro	Ala	Pro	Arg	Pro	Leu	Ala	Pro	Gly
1				5					10					15	
Cys	Ala	Arg	Pro	His	Ala	Leu	Val	Arg	Ala	Ala	Gly	Ser	Gly	Ser	Gly
			20					25					30		
Ser	Pro	Ala	Leu	Thr	Met	Ala	Pro	Ser	Ser	Leu	Gly	Ala	Leu	Gly	Pro
		35					40					45			
Trp	Val	Gly	Ala	Leu	Glu	Leu	Pro	Arg	Leu	Gln	Ala	Pro	Leu	Ser	Gln
	50					55				60					
Pro	Gly	Thr	His	Ala	Gly	Ala	Xaa	Asp	Pro	Arg	Pro	Ser	Leu	Arg	Lys
65				70				75						80	
Ala	Ser	Leu	Arg	Ala	Ala	Ser	Pro	Ala	Ala	Ser	Ser	Ser	Pro	Trp	Ala
			85					90					95		
Arg	Val	Pro	Cys	Ser	Arg	Ala	Arg	Arg	Pro	Lys	Ser	Ala	Glu	Leu	Leu
		100						105					110		
Arg	Ile	Pro	Gly	Thr	Ser	Thr	Arg	Pro	Lys	Lys	Glu	Arg	Gly	Cys	Pro
	115						120					125			
Ser	Pro	Gly	Leu	Pro	Ala	Ala	Gly	Pro	Gly	Pro	Ser	Pro	Ala	Gly	Arg
	130					135					140				
Gly	Pro	Gly	Pro	Gln	Ala										
145					150										

<210> 5405

<211> 1609

<212> DNA

<213> Homo sapiens

<400> 5405

100 105 110
 Leu Thr Asp Ala Ser Ala Cys Lys Asn Ile Leu Arg Phe Ile Gln Phe
 115 120 125
 Glu Pro Glu Glu Asp Ile Lys Arg Lys Phe Met Arg Lys Lys Asp Lys
 130 135 140
 Lys Leu Ser Asp Met His Gln Ile Val Asn Ile Asp Leu Met Leu Glu
 145 150 155 160
 Met Ser Thr Ser Leu Ala Ala Val Thr Pro Ile Ile Glu Arg Glu Ser
 165 170 175
 Gly Gly His His Tyr Val Asn Met Thr Leu Pro Val Asp Ala Val Ile
 180 185 190
 Ser Val Ala Pro Glu Glu Thr Trp Gly Lys Val Arg Lys Leu Leu Val
 195 200 205
 Asp Ala Ile His Asn Gln Leu Thr Asp Met Glu Lys Cys Ile Leu Lys
 210 215 220
 Tyr Met Lys Arg Thr Ser Ile Val Val Pro Glu Pro Leu His Phe Leu
 225 230 235 240
 Leu Pro Gly Lys Lys Asn Leu Val Thr Ile Ser Tyr Pro Ser Gly Ile
 245 250 255
 Pro Asp Gly Gln Leu Gln Ala Tyr Arg Lys Glu Leu His Asp Leu Phe
 260 265 270
 Asn Leu Pro His Asp Arg Pro Tyr Phe Lys Arg Ser Asn Ala Tyr His
 275 280 285
 Phe Pro Asp Glu Pro Tyr Lys Asp Gly Tyr Ile Arg Asn Pro His Thr
 290 295 300
 Tyr Leu Asn Pro Pro Asn Met Glu Thr Gly Met Ile Tyr Val Val Gln
 305 310 315 320
 Gly Ile Tyr Gly Tyr His His Tyr Met Gln Asp Arg Ile Asp Asp Asn
 325 330 335
 Gly Trp Gly Cys Ala Tyr Arg Ser Leu Gln Thr Ile Cys Ser Trp Phe
 340 345 350
 Lys His Gln Gly Tyr Thr Glu Arg Ser Ile Pro Thr His Arg Glu Ile
 355 360 365
 Gln Gln Ala Leu Val Asp Ala Gly Asp Lys Pro Ala Thr Phe Val Gly
 370 375 380
 Ser Arg Gln Trp Ile Gly Ser Ile Glu Val Gln Leu Val Leu Asn Gln
 385 390 395 400
 Leu Ile Gly Ile Thr Ser Lys Ile Leu Phe Val Ser Gln Gly Ser Glu
 405 410 415
 Ile Ala Ser Gln Gly Arg Glu Leu Ala Asn His Phe Gln Ser Glu Gly
 420 425 430
 Thr Pro Val Met Ile Gly Gly Gly Val Leu Ala His Thr Ile Leu Gly
 435 440 445
 Val Ala Trp Asn Glu Ile Thr Gly Gln Ile Lys Phe Leu Ile Leu Asp
 450 455 460
 Pro His Tyr Thr Gly Ala Glu Asp Leu Gln Val Ile Leu Glu Lys Gly
 465 470 475 480
 Trp Cys Gly Trp Lys Gly Pro Asp Phe Trp Asn Lys Asp Ala Tyr Tyr
 485 490 495
 Asn Leu Cys Leu Pro Gln Arg Pro Asn Met Ile
 500 505

<210> 5403

<211> 451

gacgttcctt taataactta aaagacaaaag catacacaac cagcatatta taggcatgta
 1740
 aatacatgtg ttcttaaagt gatcttcact tggaagaaaag tttttcgtcc ttctcagaag
 1800
 gagattagac acaacatatg gtaaagccaa aagcaggagc ttatagattt gcatgaaatg
 1860
 aaggcggttct tcagacttct tcataaccca cgtgacatct gtttttaaaa acacgttaac
 1920
 attaaaaact tttttttaa aagagtttta tccccaaact tccaccatgc agtcccattt
 1980
 ttggtctcta gactctggta agtataacca gtactaaaat gttaatgaga atgaaacaat
 2040
 actactagaa atacgagtgt cagtattaaa tggaataata aatgctatgc aaacaagaga
 2100
 tcactgcggg agggaaaaag cagcagctct gagttactta ccagcacttc cttttccac
 2160
 tggatatttc tacacttccg agactccgtt tctgtctgag cacggcaaca caatcattcc
 2220
 tgtcagggtg ttcacttgct tttattgtct gcatacattt aattggtgta agaaacttgg
 2280
 cacagtctgg aaatccacat gaccaagcga gatcttcagc tgtttgcccg ttcttattac
 2340
 ataaactgaa aacaggataa aaacggagtg aaatgaaaca ttgaacttaa gtctttttt
 2400
 tatatcttac aagggaattt tgggctcata caaatgttgg ttgcagaaca gaagaggtaa
 2460
 aggatgcata aggaaattgc atttttggtc actattgtat cctcagcaac taacagaatc
 2520
 cagcatagag cgggcattcc agttctgaat gaatgttaga attatctgat gtttaataca
 2580
 gtgtatgagt acccaaaggt agtcaatggg aactatagaa tgggttttcc tgaaccgaaa
 2640
 ctgaagtaga atacagtcac aatgaacaaa attg
 2674

<210> 5402

<211> 507

<212> PRT

<213> Homo sapiens

<400> 5402

Xaa	Leu	Ser	Lys	Glu	Gly	Ala	Pro	Ala	Leu	Gly	Pro	Trp	Val	Thr	Pro
1			5						10					15	
Phe	Lys	Ala	Arg	Pro	Arg	Glu	Phe	Trp	Ala	Arg	Cys	Lys	Arg	Pro	Cys
			20					25					30		
Pro	Arg	His	Val	Ala	Asp	Met	Val	Ile	Ser	Glu	Ser	Met	Asp	Ile	Leu
		35					40					45			
Phe	Arg	Ile	Arg	Gly	Gly	Leu	Asp	Leu	Ala	Phe	Gln	Leu	Ala	Thr	Pro
	50					55					60				
Asn	Glu	Ile	Phe	Leu	Lys	Lys	Ala	Leu	Lys	His	Val	Leu	Ser	Asp	Leu
65					70					75				80	
Ser	Thr	Lys	Leu	Ser	Ser	Asn	Ala	Leu	Val	Phe	Arg	Ile	Cys	His	Ser
			85					90					95		
Ser	Val	Tyr	Ile	Trp	Pro	Ser	Ser	Asp	Ile	Asn	Thr	Ile	Pro	Gly	Glu

ccccgggaat tttgggccag gtgtaagcgc ccgtgtcccc gccacgtcgc ggacatgggtg
120
atttcagaaa gtatggatat actcttcaga ataagaggag gccttgattt ggcttttcag
180
ctagctactc ctaatgaaat ttttctcaag aaggcactga aacatgtgtt gagtgacctg
240
tcaactaagc tgtcttcaaa cgccttgtg ttcagaattt gccacagttc agtgtatata
300
tggcctagca gtgacataaa caccattcct ggagaactga ctgatgcttc tgcttgtaag
360
aacatactgc gctttattca atttgagcca gaagaagata taaaaagaaa attcatgaga
420
aagaaggaca aaaagttatc agacatgcat caaatagtaa atatagatct tatgctggaa
480
atgtcaacct ccctggcagc tgtaacgccc atcattgaaa gggaaagcgg aggacaccat
540
tatgttaata tgactttacc tgtcgatgca gttatatctg ttgctccaga agaaacatgg
600
ggaaaagttc gtaagctcct ggttgatgca attcataatc aactaactga catggaaaaa
660
tgtattttga aatatatgaa aagaacatct atttgtgtcc ctgaaccact gcacttttta
720
ttaccaggga aaaaaaatct tgtaacaatt tcatatcctt caggaatacc agatggccag
780
ctgcaggcct ataggaagga gttacatgat cttttcaatc tgcctcacga cagaccctat
840
ttcaaaaggt ctaatgctta tcactttcca gatgagccat acaaagatgg ttacattaga
900
aatccacata cttaccttaa tccacctaac atggagactg gtatgattta tgtggtccag
960
ggcatatatg gctatcatca ttatatgcag gatcgcatag atgacaatgg ctggggctgt
1020
gcttatcgat ctctgcagac tatctgctct tggttcaaac atcagggata cacagagagg
1080
tccattccaa cacacagaga aattcagcag gctctagtcg atgccgggga caaaccagca
1140
acatttgctg gatcgcgga atggattgga tctattgagg tgcagctggt actaaaccaa
1200
ttgatcggtg taacgtcaaa aatcctgttt gtcagccaag gttcagaaat tgcctctcaa
1260
ggacgggaac tggctaata tttccaaagt gaaggaactc cagttatgat cgggggagga
1320
gttttgcccc acacaatact aggagttgca tggaatgaga ttacagggca gataaagttt
1380
ctgattctag atccacatta taccggtgct gaagacctgc aagttatttt ggaaaagggc
1440
tggtgcgat ggaagggccc agatttttg aacaaggatg catactataa cttatgtctt
1500
cctcagcgac caaatatgat ttaaaatc ttggagtcaa agactgcagt agagtggat
1560
tataaatttg tgaataaaga atcagtttaa tttttcacat taaatcctgg ttctagtttg
1620
accatttaaa ttatgacctt tttcaaaggt tgtaaatact gcacggagaa tgtattttta
1680

atgtctcagg aaggctatgg aactagatct caacctctc tggcccccg aaaacctaac
 480
 catgaagact tgaacttaat acagcaagaa agaccatcaa gtttaccagt aagacattat
 540
 tgtgctgatt tggaaatgta atgagttaaa gactttttaga aagagctgtt gtttttgttt
 600
 gttctacttt atattatgac atgattgaga agtttctaga cttcagggtt attttgtggt
 660
 caatttttca aggtttacct tttaggagct ctgtagtctt ggataagtct atttcatgtg
 720
 tatatatctc tgttcagag tgtagacatc agttggaagg ttttatgcgg ctggtcgatt
 780
 ttgtgtgcag gtggttattg ctgccaaaaa gcaacagcct aaagaaagct caact
 835

<210> 5400

<211> 186

<212> PRT

<213> Homo sapiens

<400> 5400

Xaa Ala Ala Gln Gln Arg Ser His Pro Ala Met Ser Pro Gly Thr Pro
 1 5 10 15
 Gly Pro Thr Met Gly Arg Ser Gln Gly Ser Pro Met Asp Pro Met Val
 20 25 30
 Met Lys Arg Pro Gln Leu Tyr Gly Met Gly Ser Asn Pro His Ser Gln
 35 40 45
 Pro Gln Gln Ser Ser Pro Tyr Pro Gly Gly Ser Tyr Gly Pro Pro Gly
 50 55 60
 Pro Gln Arg Tyr Pro Ile Gly Ile Gln Gly Arg Thr Pro Gly Ala Met
 65 70 75 80
 Ala Gly Met Gln Tyr Pro Gln Gln Gln Met Pro Pro Gln Tyr Gly Gln
 85 90 95
 Gln Gly Val Ser Gly Tyr Cys Gln Gln Gly Gln Gln Pro Tyr Tyr Ser
 100 105 110
 Gln Gln Pro Gln Pro Pro His Leu Pro Pro Gln Ala Gln Tyr Leu Pro
 115 120 125
 Ser Gln Ser Gln Gln Arg Tyr Gln Pro Gln Gln Asp Met Ser Gln Glu
 130 135 140
 Gly Tyr Gly Thr Arg Ser Gln Pro Pro Leu Ala Pro Gly Lys Pro Asn
 145 150 155 160
 His Glu Asp Leu Asn Leu Ile Gln Gln Glu Arg Pro Ser Ser Leu Pro
 165 170 175
 Val Arg His Tyr Cys Ala Asp Leu Glu Met
 180 185

<210> 5401

<211> 2674

<212> DNA

<213> Homo sapiens

<400> 5401

nccctttcaa aagaagggtgc ccccgccctt ggcccggtggg taacgccatt taaggcccg
 60

ggtttgaaga ggagagcaga ccaccagag tagtgggaga aagcaccggc agaaaagctg
 480
 gcatatccac cgagggcctc tctgcttctt ttgacctttt tcagagtttc agagttatga
 540
 accaaatcgc cttcatgaga g
 561

<210> 5398

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5398

Met	Ala	Leu	Gly	Ser	Thr	Trp	Thr	Pro	Glu	His	Lys	Thr	Gly	Gly	Arg
1				5				10					15		
Asp	Ala	Ile	His	Ser	Ala	Gly	Thr	Tyr	Ala	His	Asp	Gln	Leu	Ser	Gln
		20					25					30			
Thr	Ser	Ile	Pro	Ile	Ser	Pro	Pro	Leu	Thr	Pro	Gln	Asp	Ala	Asn	Glu
	35					40					45				
Ala	Gln	Gly	Trp	Ala	Glu	Ala	Gly	Arg	Ala	Val	His	Arg	Glu	Asp	Pro
	50				55					60					
Arg	Val	Ser	Leu	Gly	Leu	Pro	Arg	Trp	Leu	Cys	Pro	Pro	Phe	Cys	Leu
65				70				75						80	
Gly	Gly	Ser	Leu	Arg	Leu	Gly	Arg	Ala	Gln	Arg	Glu	Gly	Asp	Pro	Glu
			85				90						95		
Gly	Leu	Ala	Asp	Ser	Gly	Pro	Pro	Cys	Glu	Leu	Arg	Phe	Glu	Glu	Glu
		100					105					110			
Ser	Arg	Pro	Pro	Arg	Val	Val	Gly	Glu	Ser	Thr	Gly	Arg	Lys	Ala	Gly
	115						120					125			
Ile	Ser	Thr	Glu	Gly	Leu	Ser	Ala	Ser	Phe	Asp	Leu	Phe	Gln	Ser	Phe
	130				135						140				
Arg	Val	Met	Asn	Gln	Ile	Ala	Phe	Met	Arg						
145					150										

<210> 5399

<211> 835

<212> DNA

<213> Homo sapiens

<400> 5399

ncggccgcgc aacaaaggag tcaccggcg atgagccccg gcacccccgg accgaccatg
 60
 ggcagatccc agggcagccc aatggatcca atggtgatga agagacctca gttgtatggc
 120
 atgggagcagta accctcattc tcagcctcag cagagcagtc cgtacccagg aggttccat
 180
 ggccctccag gccacagcg gtatccaatt ggcattccagg gtcggactcc cggggccatg
 240
 gccggaatgc agtacctca gcagcagatg ccacctcagt atggacagca aggtgtgagt
 300
 ggttactgcc agcagggcca acagccatat tacagccagc agccgcagcc cccgcacctc
 360
 ccacccagg cgcagtatct gccgtcccag tcccagcaga ggtaccagcc gcagcaggac
 420

Ala	Ser	Ser	Gln	Gln	Glu	Lys	Glu	Asp	Lys	Pro	Ala	Glu	Thr	Lys	Lys
			515				520					525			
Leu	Arg	Ile	Ala	Trp	Pro	Pro	Pro	Thr	Glu	Leu	Gly	Ser	Ser	Gly	Ser
			530				535				540				
Ala	Leu	Glu	Glu	Gly	Ile	Lys	Met	Ser	Lys	Pro	Lys	Trp	Pro	Pro	Glu
			545			550				555					560
Asp	Glu	Ile	Ser	Lys	Pro	Glu	Val	Pro	Glu	Asp	Val	Asp	Leu	Asp	Leu
				565					570				575		
Lys	Lys	Leu	Arg	Arg	Ser	Ser	Ser	Leu	Lys	Glu	Arg	Ser	Arg	Pro	Phe
			580					585					590		
Thr	Val	Ala	Ala	Ser	Phe	Gln	Ser	Thr	Ser	Val	Lys	Ser	Pro	Lys	Thr
			595					600				605			
Val	Ser	Pro	Pro	Ile	Arg	Lys	Gly	Trp	Ser	Met	Ser	Glu	Gln	Ser	Glu
			610			615					620				
Glu	Ser	Val	Gly	Gly	Arg	Val	Ala	Glu	Arg	Lys	Gln	Val	Glu	Asn	Ala
			625			630				635					640
Lys	Ala	Ser	Lys	Lys	Asn	Gly	Asn	Val	Gly	Lys	Thr	Thr	Trp	Gln	Asn
				645					650					655	
Lys	Glu	Ser	Lys	Gly	Glu	Thr	Gly	Lys	Arg	Ser	Lys	Glu	Gly	His	Ser
			660					665					670		
Leu	Glu	Met	Glu	Asn	Glu	Asn	Leu	Val	Glu	Asn	Gly	Ala	Asp	Ser	Asp
			675				680					685			
Glu	Asp	Asp	Asn	Ser	Phe	Leu	Lys	Gln	Gln	Ser	Pro	Gln	Glu	Pro	Lys
			690			695					700				
Ser	Leu	Asn	Trp	Ser	Ser	Phe	Val	Asp	Asn	Thr	Phe	Ala	Glu	Glu	Phe
					710					715					720
Thr	Thr	Gln	Asn	Gln	Lys	Ser	Gln	Asp	Val	Glu	Leu	Trp	Glu	Gly	Glu
				725				730						735	
Val	Val	Lys	Glu	Leu	Ser	Val	Glu	Glu	Gln	Ile	Lys	Arg	Asn	Arg	Tyr
			740					745					750		
Tyr	Asp	Glu	Asp	Glu	Asp	Glu	Glu								
			755				760								

<210> 5397

<211> 561

<212> DNA

<213> Homo sapiens

<400> 5397

ttttttttt gcgaatctgt tgatttattt acggctcggg gagacgacgc tggacgctgg
60

ttagggtaag ggtagggca agcattagca gcaggggcat ggccctggga agcacctgga
120

ccccagaaca taagacagga gggagagatg ccatccattc agcgggcact tatgcccacg
180

accagctgag ccagaccagc attcccattt caccaccct tactcctcaa gatgcaaagt
240

aagctcaggg ctgggaggaa gctggcaggg ctgtccacag ggaggacccc cgtgtgtctc
300

tggggtgcc caggtggctc tgtccaccct tctgtctggg aggtcctta aggtggggga
360

gggcccagag ggaaggagat cctgaggggc tggcagattc aggcctccc tgcgagctga
420

```

65          70          75          80
Leu Gly Ala Glu Ser His Thr Asp Ser Leu Arg Asn Ser Ser Thr Glu
      85          90          95
Ile Arg His Arg Ala Asp His Pro Pro Ala Glu Val Thr Ser His Ala
      100          105          110
Ala Ser Gly Ala Lys Ala Asp Gln Glu Glu Gln Ile His Pro Arg Ser
      115          120          125
Arg Leu Arg Ser Pro Pro Glu Ala Leu Val Gln Gly Arg Tyr Pro His
      130          135          140
Ile Lys Asp Gly Glu Asp Leu Lys Asp His Ser Thr Glu Ser Lys Lys
      145          150          155          160
Met Glu Asn Cys Leu Gly Glu Ser Arg His Glu Val Glu Lys Ser Glu
      165          170          175
Ile Ser Glu Asn Thr Asp Ala Ser Gly Lys Ile Glu Lys Tyr Asn Val
      180          185          190
Pro Leu Asn Arg Leu Lys Met Met Phe Glu Lys Gly Glu Pro Thr Gln
      195          200          205
Thr Lys Ile Leu Arg Ala Gln Ser Arg Ser Ala Ser Gly Arg Lys Ile
      210          215          220
Ser Glu Asn Ser Tyr Ser Leu Asp Asp Leu Glu Ile Gly Pro Gly Gln
      225          230          235          240
Leu Ser Ser Ser Thr Phe Asp Ser Glu Lys Asn Glu Ser Arg Arg Asn
      245          250          255
Leu Glu Leu Pro Arg Leu Ser Glu Thr Ser Ile Lys Asp Arg Met Ala
      260          265          270
Lys Tyr Gln Ala Ala Val Ser Lys Gln Ser Ser Ser Thr Asn Tyr Thr
      275          280          285
Asn Glu Leu Lys Ala Ser Gly Gly Glu Ile Lys Ile His Lys Met Glu
      290          295          300
Gln Lys Glu Asn Val Pro Pro Gly Pro Glu Val Cys Ile Thr His Gln
      305          310          315          320
Glu Gly Glu Lys Ile Ser Ala Asn Glu Asn Ser Leu Ala Val Arg Ser
      325          330          335
Thr Pro Ala Glu Asp Asp Ser Pro Gly Asp Ser Gln Val Lys Ser Glu
      340          345          350
Val Gln Gln Pro Val His Pro Lys Pro Leu Ser Pro Asp Ser Arg Ala
      355          360          365
Ser Ser Leu Ser Glu Ser Ser Pro Pro Lys Ala Met Lys Lys Phe Gln
      370          375          380
Ala Pro Ala Arg Glu Thr Cys Val Glu Cys Gln Lys Thr Val Tyr Pro
      385          390          395          400
Met Glu Arg Leu Leu Ala Asn Gln Gln Val Phe His Ile Ser Cys Phe
      405          410          415
Arg Cys Ser Tyr Cys Asn Asn Lys Leu Ser Leu Gly Thr Tyr Ala Ser
      420          425          430
Leu His Gly Arg Ile Tyr Cys Lys Pro His Phe Asn Gln Leu Phe Lys
      435          440          445
Ser Lys Gly Asn Tyr Asp Glu Gly Phe Gly His Arg Pro His Lys Asp
      450          455          460
Leu Trp Ala Ser Lys Asn Glu Asn Glu Glu Ile Leu Glu Arg Pro Ala
      465          470          475          480
Gln Leu Ala Asn Ala Arg Glu Thr Pro His Ser Pro Gly Val Glu Asp
      485          490          495
Ala Pro Ile Ala Lys Val Gly Val Leu Ala Ala Ser Met Glu Ala Lys

```

aacaaaaaaaa cacaaaaaac acattctaaa tactagagat aactttactt aaattcttca
 2640
 ttttagcagt gatgatatgc ataagtgtg taaggcttgt aactggggaa atattccacc
 2700
 tgataatagc ccagattcta ctgtattccc aaaaggcaat attaaggtag atagatgatt
 2760
 agtagtatat tgttacacac ttttttgga ttagagaaca tacagaagga atttaggggc
 2820
 ttaaacatta cgactgaatg cactttagta taaagggcac agtttgata tttttaaag
 2880
 aataccaatt taatttttta gtatttacct gttaagagat tatttagtct ttaaattttt
 2940
 taggttaatt ttcttgctgt gatatatatg aggaatttac tactttatgt cctgctctct
 3000
 aaactacatc ctgaactcga cgtcctgagg tataatacaa cagagcactt tttgaggcaa
 3060
 ttgaaaaacc aacctacact cttcgggtgct tagagagatc tgctgtctcc caaataagct
 3120
 tttgtatctg ccagtgaatt tactgtactc caaatgattg ctttcttttc tggatgatc
 3180
 tgtgcttctc ataattactg aaagctgcaa ttttttagta ataccttcgg gatcactgtc
 3240
 ccccatcttc cgtgttagag caaagtgaag agtttaaagg aggaagaaga aagaactgtc
 3300
 ttacaccact tgagctcaga cctctaaacc ctgtatttcc cttatgatgt cccctttttg
 3360
 agacactaat ttttaaatac ttactagctc tgaaatatat tgatttttat cacagtatc
 3420
 tcagggtgaa attaaaccaa ctataggcct ttttcttggg atgattttct agtcttaagg
 3480
 tttggggaca ttataaactt gagtacattt gttgtacaca gttgatattc caaattgtat
 3540
 ggatggggagg gagaggtgtc ttaagctgta ggcttttctt tgtactgcat ttatagagat
 3600
 ttagctttta ttttttttag agatgtaaaa cattctgctt tcttagtctt acctagtctg
 3660
 aaacattttt attcaataaa gattttaatt aaaatttgaa aaaaaaaaaa a
 3711

<210> 5396

<211> 760

<212> PRT

<213> Homo sapiens

<400> 5396

Met	Glu	Ser	Ser	Pro	Phe	Asn	Arg	Arg	Gln	Trp	Thr	Ser	Leu	Ser	Leu
1				5					10				15		
Arg	Val	Thr	Ala	Lys	Glu	Leu	Ser	Leu	Val	Asn	Lys	Asn	Lys	Ser	Ser
			20					25					30		
Ala	Ile	Val	Glu	Ile	Phe	Ser	Lys	Tyr	Gln	Lys	Ala	Ala	Glu	Glu	Thr
		35					40					45			
Asn	Met	Glu	Lys	Lys	Arg	Ser	Asn	Thr	Glu	Asn	Leu	Ser	Gln	His	Phe
	50					55				60					
Arg	Lys	Gly	Thr	Leu	Thr	Val	Leu	Lys	Lys	Lys	Trp	Glu	Asn	Pro	Gly

taccaggcag ctgtgtccaa acaaagcagc tcaaccaact atacaaatga gctgaaagcc
1020
agtgggtggcg aaatcaaaat tcataaaatg gagcaaaagg agaatgtgcc cccaggtcct
1080
gaggtctgca tcacccatca ggaaggggaa aagatttctg caaatgagaa tagcctggca
1140
gtccgttcca cccctgccga agatgactcc ccaggtgact cccagggttaa gagtgaaggt
1200
caacagcctg tccatcccaa gccactaagt ccagattcca gagcctccag tctttctgaa
1260
agttctctc ccaaagcaat gaagaagttt caggcacctg caagagagac ctgctggaa
1320
tgtcagaaga cagtctatcc aatggagcgt ctcttgcca accagcaggt gtttcacatc
1380
agctgcttcc gttgctccta ttgcaacaac aaactcagtc taggaacata tgcattctta
1440
catggaagaa tctattgtaa gcctcacttc aatcaactct ttaaactctaa gggcaactat
1500
gatgaaggct ttgggcacag accacacaag gatctatggg caagcaaaaa tgaaaacgaa
1560
gagattttgg agagaccagc ccagcttgca aatgcaaggg agaccctca cagcccaggg
1620
gtagaagatg cccctattgc taagggtggg gtcttggtg caagtatgga agccaaggcc
1680
tcctctcagc aggagaagga agacaagcca gctgaaacca agaagctgag gatcgcttg
1740
ccacccccca ctgaacttgg aagttcagga agtgccttgg aggaagggat caaaatgtca
1800
aagcccaaat ggctctctga agacgaaatc agcaagcccg aagttcctga ggatgtcgat
1860
ctagatctga agaagctaag acgatcttct tctctgaagg aaagaagccg cccattcact
1920
gtagcagctt catttcaaag cacctctgtc aagagcccaa aaactgtgtc cccacctatc
1980
aggaaaggct ggagcatgtc agagcagagt gaagagtctg tgggtggaag agttgcagaa
2040
aggaaacaag tggaaaatgc caaggcttct aagaagaatg ggaatgtggg aaaaacaacc
2100
tggaacaaca aagaatctaa aggagagaca gggaagagaa gtaagggaagg tcatagtttg
2160
gagatggaga atgagaatct ttagaaaaat ggtgcagact ccgatgaaga tgataacagc
2220
ttctctcaac aacaatctcc acaagaacct aagtctctga attggtcgag tttttagac
2280
aacacctttg ctgaagaatt cactactcag aatcagaaat cccaggatgt ggaactctgg
2340
gagggagaag tggtaaaga gctctctgtg gaagaacaga taaagagaaa tcggtattat
2400
gatgaggatg aggatgaaga gtgacaaatt gcaatgatgc tgggccttaa attcatgtta
2460
gtgttagcga gccactgccc tttgtcaaaa tgtgatgcac ataagcaggt atcccagcat
2520
gaaatgtaat ttacttggaa gtaactttgg aaaagaattc cttcttaaaa tcaaaaacaa
2580

```
<210> 5395
<211> 3711
<212> DNA
<213> Homo sapiens
```

4576

agggacagca tgactcgctt tgcgatgaa aagcacgaag ttgtcagcac agaactggc
 4440
 cagtccttga gaaactccct ccttggtggt cagaggtcaa gcagcccatg tggccacgg
 4500
 tcctgaagaa ctgggctatg tccctgagggc tcctctctac cgtctgactg tggggtctgg
 4560
 ggaacaggca tttaaaccag gctgctgccc tggggagtgc cactggacg ccagggtgcc
 4620
 ccatagggac agggtcacaa agccctgggg cttccctgc cagtcctggt gaggacagt
 4680
 tggtcactat ctgagagaga cgaaaaatga atattctgtc atttcagact aaactactca
 4740
 cccagctcac actaatatgg atttgtaaat ttacctttt tttttctttc caactttagg
 4800
 ttcaagggtt gttacatggg taaattggat cataggg
 4837

<210> 5394

<211> 354

<212> PRT

<213> Homo sapiens

<400> 5394

Leu	Tyr	Asp	Gln	Ala	Leu	Leu	Gly	Ile	Leu	Gln	His	Val	Gly	Asn	Val
1				5					10					15	
Gln	Asp	Phe	Leu	Arg	Val	Leu	Phe	Gly	Phe	Leu	Tyr	Arg	Lys	Thr	Asp
			20					25					30		
Phe	Tyr	Arg	Leu	Leu	Arg	His	Pro	Ser	Asp	Arg	Met	Gly	Phe	Pro	Pro
			35				40					45			
Gly	Ala	Ala	Gln	Ala	Leu	Val	Leu	Gln	Val	Phe	Lys	Thr	Phe	Asp	His
	50					55				60					
Met	Ala	Arg	Gln	Asp	Asp	Glu	Lys	Arg	Arg	Gln	Glu	Leu	Glu	Glu	Lys
65					70					75				80	
Ile	Arg	Arg	Lys	Glu	Glu	Glu	Glu	Ala	Lys	Thr	Val	Ser	Ala	Ala	Ala
				85					90					95	
Ala	Glu	Lys	Glu	Pro	Val	Pro	Val	Pro	Val	Gln	Glu	Ile	Glu	Ile	Asp
			100					105					110		
Ser	Thr	Thr	Glu	Leu	Asp	Gly	His	Gln	Glu	Val	Glu	Lys	Val	Gln	Pro
			115				120					125			
Pro	Gly	Pro	Val	Lys	Glu	Met	Ala	His	Gly	Ser	Gln	Glu	Ala	Glu	Ala
			130				135				140				
Pro	Gly	Ala	Val	Ala	Gly	Ala	Ala	Glu	Val	Pro	Arg	Glu	Pro	Pro	Ile
145					150					155				160	
Leu	Pro	Arg	Ile	Gln	Glu	Gln	Phe	Gln	Lys	Asn	Pro	Asp	Ser	Tyr	Asn
				165					170					175	
Gly	Ala	Val	Arg	Glu	Asn	Tyr	Thr	Trp	Ser	Gln	Asp	Tyr	Thr	Asp	Leu
			180					185					190		
Glu	Val	Arg	Val	Pro	Val	Pro	Lys	His	Val	Val	Lys	Gly	Lys	Gln	Val
			195				200					205			
Ser	Val	Ala	Leu	Ser	Ser	Ser	Ser	Ile	Arg	Val	Ala	Met	Leu	Glu	Glu
			210				215				220				
Asn	Gly	Glu	Arg	Val	Leu	Met	Glu	Gly	Lys	Leu	Thr	His	Lys	Ile	Asn
225					230					235				240	
Thr	Glu	Ser	Ser	Leu	Trp	Ser	Leu	Glu	Pro	Gly	Lys	Cys	Val	Leu	Val

gaattcttgt catctatgag gggtcctgag aaagacttgt cttttttttt cctggagttc
2820
ttcccatga ggtcctagga tttgcacacc actgtccac aagagctttc ctgcctaata
2880
aaaggaggtc ttgtggtgtg tgtctctctt cttctctata gttcccgagt tggcccccac
2940
tgcagccccc accctgtggg tagtcttcca gaagtgatgc agtggtgtga gatgccctac
3000
accttggtat ttgggagact ttgagagtca ttcacttcca tggtgactag tgtttgtttt
3060
gcctgatttt atattctgtg ttgcatttct cccactccc tgcctgctt taataaacag
3120
caaaccaata tctaggaaga atgactgagg gatagtattg ggtattggcc ccatggcagg
3180
aacagccact tgcactcgtt cccggtgcca cactgcggtg cttggtgtgg ttgtggagcc
3240
tgtccctgcg cgccttctc ccgttgagcc acgctgtctg gtgggtgatt ctctgcctg
3300
agccaccacc ctggactggc ccagtctcca gagctggcac accctgctg tttctcttt
3360
ttagacacaa cagccgcagt ttggccagcc actaagtccc accagctgag gtccgaggaa
3420
agcggggtga ctcatctccc ttgtccaggg cccgaggaga gtgagggtgc cagcctgcaa
3480
agctattcca gctccttggg gttggtttgc aataaattgg tatttaagca gttctgggtc
3540
tgcgtgtgac atttctgtct gagacagttc tgtctgtgca tggtcattat tgttgcatc
3600
tagccttgag gtcccaggcc aacgtacaca gcaaaccaca gcatggggaa ttcttagggg
3660
ttgtttccc tctggtctga atgactggg caagatctca atacagcttt agaaatcctg
3720
taagattttg accagtgggg agaaaaagaa tgtagctata gatcttacat cctttcaaac
3780
aggttctgga attctgtagt tactggaaag cttagggtga gtgcagagtt gggaatgatt
3840
ccactgaagg gccacctttg cccaccaggc tccaaggccc tccttgggtc ccaggtgcat
3900
acctgctgtt aactttgtg agccctcgca atgggcttcc tccaggacat aacgcctgt
3960
ctgacacaga agtctcccag gtggctggcc acctgcttct tcctcagtca gatctttgac
4020
tctccttctc tgtgcccacc ccatctccag cctcctctga ccctgctcac ccctggggac
4080
aggacctagg ggtgtgagaa gtacttggct gaataaagac tgtttcaaag gcaatcctta
4140
gaattgccta gcatactccc agggccagaa ataaccgccc agaaaggaga ggcgtatttg
4200
cccctgaaga gtgcaggagg gagaacagtt gagaagtgtt ttgtgtggaa atgtgtccaa
4260
gaggcgtcag ctgctgcaca gagaactcac tgcccagaac actgcgcttg gggaacagac
4320
ctcaccceca cctcaaactc gctctccact gggcctgttg gcagccagct cagctgggga
4380

ggggaggcag agccttatcc tcggctgccc ttcttggtc cctgcattcc agggacttgc
1200
tcgtcttggt. tacccttagc catcctttct ttcaaggggtg aaccaggcct tccaccctga
1260
ccttgcatct ccagactgtt ccagagaagg tgcggggcca gctgctatgt ggtggccgct
1320
gtggctgaca ctgagtgaag gtgtttgaaa tgcaggagag gatatcccag caaattggga
1380
tcacatgctt ttgtctccac agcaaccagc cactgcaggc agcatgtctt tcctcccctg
1440
ctctctgctt gctgttggtt tgacgtatt ctgcttgcac gtcttctggt tgggatgtgg
1500
agttgttgct ggactctcag gcgaagctga agtcattgaa gtgtgtgaag ctctgtgctt
1560
gcatgagggc aagcaaggaa tggctgtgcc tgaggctgct ctgggaaact ccttgccccct
1620
tgacctctt tgagagcatt cacgtggtct tcttgctcat cccctataa atgtgctttg
1680
cctgcctcag cctcatggtc agagcagtgg agactggagc cctgtttgca cgttctagtt
1740
gttcggagaa agcctaggtt ctgggctcag gtccagatgc agcggggatt ctgttctctg
1800
actgtggcga ccttgctttg gttcttggtt aagtgaacca agcccggcca ccacgcattg
1860
catgctgtgc ttggctcccc ataagacgtc ctctttgggt gcacggtgtc aaagtgtggg
1920
caggagtggg gagctgggtc cctcaggagg agaccacagc atgtccatca gctcagcaga
1980
gctcgacagc cacaagtcct gagaagcttt gaccttgaag ggcttctggg agaggaggaa
2040
tttctgcatg ggcgtgaag gcacactgtc ccaccacaac tgaaccagaa gagagtgaag
2100
actcccctct tccatcctc tgtgccaggt gccagactgt gctccttggg acttatggcc
2160
caatcttacc tgttctccag ggactgggtc ctgcctcagg accccaagc ctatgcctg
2220
agccatggct gctgactgac tccagccaag gtgcaaagac gagattatga gacaggtcct
2280
caggcctgtg ttccaagtac tcacaggggc tctgggtgcc catcgccggg agtatggttc
2340
agctgccacc ggcactgtcc atttgctgt ctgtcaagct cagagcatgg ataagccaca
2400
cagcagggca gtgcaccctg gcacatgca cggccagcaa gaatcaaggc ccgcagatgc
2460
taagagggcc tattgtcagg ggaaggtccc cgctcctgca cactctctat ggatacttgg
2520
gttggtgggg ctctcttggg gagtaagttt gtggtttgtt tctggtttac agtgggtggc
2580
gacaccctt gtaagaaagc attcctggga agtcttctgt ggtccaaac atgttgcctc
2640
gatcatcaca ggagagcaaa aggccttaga taccctctt ggaatgtgag agtcttgttg
2700
tctgatattt gccactgagc tgggtgaagc cctctaaaga gatctcgacc ctggggagca
2760

<400> 5392

Thr Asn Leu Leu Lys Val Asn Lys Gln Tyr Lys Leu Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Arg Gln Gly Leu Ala Leu Ser Phe Arg Leu Lys Cys Ser Gly
 20 25 30
 Thr Ile Lys Gly His Cys Asn Leu Ser Leu Asn Leu Leu Gly Ser Ser
 35 40 45
 Asn Pro Pro Ala Ser Ala Ser
 50 55

<210> 5393

<211> 4837

<212> DNA

<213> Homo sapiens

<400> 5393

nnagtatcta gggcgaggagg cgacatggag acagggggcgg ccgagctgta tgaccaggcc
 60
 cttttgggca tcctgcagca cgtgggcaac gtccaggatt tcctgcgcgt tctctttggc
 120
 ttctcttacc gcaagacaga cttctatcgc ttgctgcgcc acccatcgga ccgcatgggc
 180
 ttcccgcccg gggccgcgca ggccttggtg ctgcaggat tcaaaacctt tgaccacatg
 240
 gcccgtcagg atgatgagaa gagaaggcag gaacttgaag agaaaatcag aagaaaggaa
 300
 gaggaaggagg ccaagactgt gtcagctgct gcagctgaga aggagccagt ccaggttcca
 360
 gtccaggaaa tagagattga ctccaccaca gaattggatg ggcatcagga agtagagaaa
 420
 gtgcagcctc caggccctgt gaaggaaatg gcccatgggt cacaggaggc agaagctcca
 480
 ggagcagttg ctggtgctgc tgaagtcctt aggaaccac caattcttcc caggattcag
 540
 gagcagttcc agaaaaatcc cgacagttac aatggtgctg tccgagagaa ctacacctgg
 600
 tcacaggact atactgacct ggaggtcagg gtgccagtac ccaagcacgt ggtgaaggga
 660
 aagcaggtct cagtggccct tagcagcagc tccattcgtg tggccatgct ggaggaaaat
 720
 ggggagcgcg tcctcatgga agggaaagctc acccacaaga tcaaacactga gagttctctc
 780
 tggagtctcg agcccgggaa gtgcgttttg gtgaacctga gcaagggtgg cgagtattgg
 840
 tggaaaccca tcctggaggg agaagagccc atcgacattg acaagatcaa caaggagcgc
 900
 tccatggcca ccgtggatga ggaggaacag gcggtgttgg acaggcttac ctttgactac
 960
 caccagaagc tgcagggcaa gccacagagc catgagctga aagtccatga gatgctgaag
 1020
 aaggggtggg atgctgaagg ttctcccttc cgaggccagc gattcgaccc tgccatgttc
 1080
 aacatctccc cgggggctgt gcagttttaa tgaccagaag gaaaggaaac cctcgccggg
 1140

```

      20      25      30
Ile Met Gly Arg Glu Lys Leu Lys Ala Ala Asp Cys Asp Leu Gln Ile
      35      40      45
Thr Asn Ala Gln Thr Lys Glu Glu Tyr Thr Asp Asp Asn Ala Leu Ile
      50      55      60
Pro Lys Asn Ser Ser Val Ile Val Arg Arg Ile Pro Ile Gly Gly Val
      65      70      75      80
Lys Ser Thr Ser Lys Thr Tyr Val Ile Ser Arg Thr Glu Pro Ala Met
      85      90      95
Ala Thr Thr Lys Ala Val Cys Lys Asn Thr Ile Ser His Phe Phe Tyr
      100      105      110
Thr Leu Leu Leu Pro Leu
      115

```

<210> 5391
 <211> 797
 <212> DNA
 <213> Homo sapiens

```

<400> 5391
nggctcaaaa cgatcctctc accttgccct ccaaagtgt gggattacag gatgagccac
60
tgcattcagt ctaaattctc tttccacat accaaatgaa caaatttatt aaagggtgaat
120
aaacagtaca aattattatt attattatta ttgagacagg gtcttgctct gtcattcagg
180
ctaaagtgca gtggcacaat caagggtcac tgcaacctca gcctcaacct cctgggctca
240
agcaatcctc ctgcctcagc ctctgagca gcagggacta cagggtgcaca ccaccatgtc
300
cagctacttt ttttattctt tgtagagaca gggctctact acattaccct ggctgggtctc
360
aaacttctgg gctcaaatga tctcccgcc tcagcctccc aaaactctgg catgagccac
420
tatgtcagc ctcagatatg gatttttatt aagctttttt tttccctacc aattgccagc
480
caatttattt taaaaataca ggtttctggc ttcttttgca aagtcaaatc tggcaacact
540
ggaccaacat ttccaccagg ctgcaatggt ctgaaactga cttgagccca tgtgcactgg
600
aagggccctg cctctggccc ctctggact tgtggctgcc ctttagatgg gaatccattt
660
ttctgttcac cgcactctct accgctctct attgcacctg acccagctgc tatataggat
720
agtaacatta attccctggc tccccaaaag catttgagtc tgcaacccat gtgctgggat
780
gatgtagggg gccacag
797

```

<210> 5392
 <211> 55
 <212> PRT
 <213> Homo sapiens

gcctgggcct ggggaagctg acgccggtcg tccggaagcc aggaggaggc gtgaggccgc
 480
 tcgtggactc cgggcctagg ccctctcccc tcaaccttct cccggggcct gggtcacccc
 540
 aatccacgga gagagagacc cgccgggagg tgcggccgcg ctatggaccc ctgacccccg
 600
 tggggtcgct cggactctta acgtgtggac tgaccgctac tgactgcacc gccaatcccc
 660
 ccgtctctgc cggcccccta gcatgagcga gggggaccca gccgggtgac attgtgcccc
 720
 ttggcggatt ctcgatttcc cctcttcccc gtccctcgcc tcctcctccc ccatgaagtg
 780
 attctgagta tcgggggggc tctggattat tgttctgacg aacctctgct tgtggttggg
 840
 gggatattta tctgaggcct tagggctcct cggtgtcttt gagtgttttg tgtgtacata
 900
 ttttgcctt aaagtttata aatatacgta tattgagagt gtccacgtct cctcgtgaa
 960
 ccttaggaat cccttggcac catgtcctgt gtgcattata aattttcctc taaactcaac
 1020
 tatgataccg tcacctttga tgggctccac atctccctct gcgacttaaa gaagcagatt
 1080
 atggggagag agaagctgaa agctgccgac tgcgacctgc agatcaccaa tgcgcagacg
 1140
 aaagaagaat atactgatga taatgctctg attcctaaga attcttctgt aattgttaga
 1200
 agaattccta ttggagggtg taaatctaca agcaagacat atgtttataag tcgaactgaa
 1260
 ccagcgatgg caactacaaa agcagtatgt aaaaacacaa tctcacactt tttctacaca
 1320
 ttgcttttac ctttataatg tagcagttaa gtaaatcatt ttagaactta atatccaact
 1380
 gatcatagta catattgtaa ataaaatgta ttttgatgac agctcagttg aatatggata
 1440
 atatgtggca tcacttgcac acttattttg tagaaatggg taatttgtgc ccgtaaacact
 1500
 gtttcatatt aaatatgata gcattatccc tgtatgacac tgtgtgtgac agttaatgta
 1560
 tgatcctttt tagatcgttt aggttttaca ctaaggaaca tgatgacatg ttctacattt
 1620
 gtctgtctat agttagtatt ttgtatgtat gtacaggctg ttgtgtgctt tttgtttctt
 1680
 gcaataaaaa atgtttggag tgtatatattt g
 1711

<210> 5390

<211> 118

<212> PRT

<213> Homo sapiens

<400> 5390

Met Ser Cys Val His Tyr Lys Phe Ser Ser Lys Leu Asn Tyr Asp Thr
 1 5 10 15
 Val Thr Phe Asp Gly Leu His Ile Ser Leu Cys Asp Leu Lys Lys Gln

atgaccctga tcattcctcat cgtggagctg tgcgggctcc aggcccgctt cccctgtct
 180
 tggcgcaact tccccatcac ctctgcctgc tatggggccc tcttctgct ctgggctcc
 240
 atcatctacc ccaccaccta tgtccagttc ctgtcccacg gccgttcgcy ggaccacgcc
 300
 atcgccgcca ccttctcttc ctgcatcgcy tgtgtggctt acgccaccga aatggcctgg
 360
 acccgggccc gggcc
 375

<210> 5388

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5388

Xaa	Asp	Ser	Pro	Arg	Phe	Ser	Arg	Met	Ala	Met	Ala	Ala	Arg	Met	Lys
1			5					10					15		
Gln	Met	Ala	Tyr	Thr	Ala	Thr	His	Gln	Ser	Met	Gly	Asn	Trp	Ser	Met
			20					25					30		
Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Met	Thr	Leu	Ile	Ile	Leu	Ile	Val
			35					40					45		
Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro	Leu	Ser	Trp	Arg	Asn	Phe
			50					55					60		
Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	Phe	Cys	Leu	Ser	Ala	Ser
Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe	Leu	Ser	His	Gly	Arg	Ser
Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe	Ser	Cys	Ile	Ala	Cys	Val
Ala	Tyr	Ala	Thr	Glu	Met	Ala	Trp	Thr	Arg	Ala	Arg	Ala			

<210> 5389

<211> 1711

<212> DNA

<213> Homo sapiens

<400> 5389

nncgagcggc agggggccaa acacaaaagg gagccggaga agccctagcc gctgcccagc
 60
 agcttgccgg cgtgttctcg cggttccggg cctcaaggcg acggaaacga aaggcgagcg
 120
 aagcgccgag gatccggcga gaagaagcgt caggagcct cggcgggtgc cccggggctc
 180
 gccgaagcca cccggccgcc ggctggggcc cgggggtggtg aggaagtgct ccgaggcctc
 240
 gccgaggcct agcggcggt ttgtgtccga ggccggcgcg gcggcggggg gaggcggagc
 300
 cggggcgggc ctgcggaag gcctctctc cgccgaccgc gcgttttcgg cctaggccgc
 360
 gggggccgctc gtggcctccg gggagcaggc gccaggggtt tgtgtgcggt gggggcctgg
 420

485 490 495
 Glu Val Thr Leu Leu His Phe Leu Gln Glu Tyr Leu
 500 505

<210> 5385
 <211> 314
 <212> DNA
 <213> Homo sapiens

<400> 5385
 agatctcacg agatggggac cccagctggc actgggtggc atttcttctt cccttgetct
 60
 acttggagca tatgttggtc gtggaaccga aaggaacgta gcaaaaagag tggtccacgc
 120
 cctccccggg cccagccgct gggcagaggg ctgcatgctg gctggctggc caggctgggg
 180
 cagcctggcc tctcggcc ctacgtgca cccaccttcc acttctgga gatgcaccca
 240
 catctccagg aaaattgttt cagaaaatgc ctacaacaca gcagagagtg gaacaaacag
 300
 ggtcccaacg catg
 314

<210> 5386
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5386
 Met Gly Thr Pro Ala Gly Thr Gly Trp His Phe Phe Phe Pro Cys Ser
 1 5 10 15
 Thr Trp Ser Ile Cys Cys Ser Trp Asn Arg Lys Glu Arg Ser Lys Lys
 20 25 30
 Ser Val Pro Ser Pro Pro Arg Ala Gln Pro Leu Gly Arg Gly Leu His
 35 40 45
 Ala Gly Trp Leu Ala Arg Leu Gly Gln Pro Gly Leu Leu Gly Pro Tyr
 50 55 60
 Ala Ala Pro Thr Phe His Phe Leu Glu Met His Pro His Leu Gln Glu
 65 70 75 80
 Asn Cys Phe Arg Lys Cys Leu Gln His Ser Arg Glu Trp Asn Lys Gln
 85 90 95
 Gly Pro Asn Ala
 100

<210> 5387
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 5387
 ntggactccc ccaggttcag caggatggcg atggccgcta ggatgaagca gatggcgta
 60
 accgccacgc accagtccat gggcaactgg tccatgttca cctggtgctt ctgcttctcc
 120

50	55	60
Arg Ala Val Pro Arg	Asn Val Gln Pro Tyr	Val Val Tyr Glu Glu Val
65	70	75
Thr Asn Val Trp Ile	Asn Val His Asp Ile	Phe Tyr Pro Phe Pro Gln
	85	90
Ser Glu Gly Glu Asp	Glu Leu Cys Phe Leu	Arg Ala Asn Glu Cys Lys
	100	105
Thr Gly Phe Cys His	Leu Tyr Lys Val Thr	Ala Val Leu Lys Ser Gln
	115	120
Gly Tyr Asp Trp Ser	Glu Pro Phe Ser Pro	Gly Glu Gly Glu Gln Ser
	130	135
Leu Thr Asn Ala Ile	Trp Val Asn Glu Glu	Thr Lys Leu Val Tyr Phe
145	150	155
Gln Gly Thr Lys Asp	Thr Pro Leu Glu His	His Leu Tyr Val Val Ser
	165	170
Tyr Glu Ala Ala Gly	Glu Ile Val Arg Leu	Thr Thr Pro Gly Phe Ser
	180	185
His Ser Cys Ser Met	Ser Gln Asn Phe Asp	Met Phe Val Ser His Tyr
	195	200
Ser Ser Val Ser Thr	Pro Pro Cys Val His	Val Tyr Lys Leu Ser Gly
	210	215
Pro Asp Asp Asp Pro	Leu His Lys Gln Pro	Arg Phe Trp Ala Ser Met
225	230	235
Met Glu Ala Ala Lys	Ile Phe His Phe His	Thr Arg Ser Asp Val Arg
	245	250
Leu Tyr Gly Met Ile	Tyr Lys Pro His Ala	Leu Gln Pro Gly Lys Lys
	260	265
His Pro Thr Val Leu	Phe Val Tyr Gly Gly	Pro Gln Val Gln Leu Val
	275	280
Asn Asn Ser Phe Lys	Gly Ile Lys Tyr Leu	Arg Leu Asn Thr Leu Ala
	290	295
Ser Leu Gly Tyr Ala	Val Val Val Ile Asp	Gly Arg Gly Ser Cys Gln
305	310	315
Arg Gly Leu Arg Phe	Glu Gly Ala Leu Lys	Asn Gln Met Gly Gln Val
	325	330
Glu Ile Glu Asp Gln	Val Glu Gly Leu Gln	Phe Val Ala Glu Lys Tyr
	340	345
Gly Phe Ile Asp Leu	Ser Arg Val Ala Ile	His Gly Trp Ser Tyr Gly
	355	360
Gly Phe Leu Ser Leu	Met Gly Leu Ile His	Lys Pro Gln Val Phe Lys
	370	375
Val Ala Ile Ala Gly	Ala Pro Val Thr Val	Trp Met Ala Tyr Asp Thr
385	390	395
Gly Tyr Thr Glu Arg	Tyr Met Asp Val Pro	Glu Asn Asn Gln His Gly
	405	410
Tyr Glu Ala Gly Ser	Val Ala Leu His Val	Glu Lys Leu Pro Asn Glu
	420	425
Pro Asn Arg Leu Leu	Ile Leu His Gly Phe	Leu Asp Glu Asn Val His
	435	440
Phe Phe His Thr Asn	Phe Leu Val Ser Gln	Leu Ile Arg Ala Gly Lys
	450	455
Pro Tyr Gln Leu Gln	Val Ala Leu Pro Pro	Val Ser Pro Gln Ile Tyr
465	470	475
Pro Asn Glu Arg His	Ser Ile Arg Cys Pro	Glu Ser Gly Glu His Tyr

ggcgagatcg tacgcctcac cacgcccggc ttctcccata gctgctccat gagccagaac
 900
 ttcgacatgt tcgtcagcca ctacagcagc gtgagcacgc cgccctgcgt gcacgtctac
 960
 aagctgagcg gccccgacga cgacccccctg cacaagcagc cccgcttctg ggctagcatg
 1020
 atggaggcag ccaagatctt ccatttccac acgcgctcgg atgtgcggct ctacggcatg
 1080
 atctacaagc cccacgcctt gcagccaggg aagaagcacc ccaccgtcct ctttgtatat
 1140
 ggaggccccc aggtgcagct ggtgaataac tccttcaaag gcatcaagta cttgcggctc
 1200
 aacacactgg cctccctggg ctacgccgtg gttgtgattg acggcagggg ctccctgtcag
 1260
 cgagggttgc ggttcgaagg ggccctgaaa aaccaaattg gccaggtgga gatcgaggac
 1320
 caggtggagg gcctgcagtt cgtggccgag aagtatggct tcatcgacct gagccgagtt
 1380
 gccatccatg gctggctcta cgggggttgc ctctcgctca tggggctaata ccacaagccc
 1440
 caggtgttca aggtggccat cgcggttgcc ccggtcaccg tctggatggc ctacgacaca
 1500
 gggtagactg agcgctacat ggacgtccct gagaacaacc agcacggcta tgaggcgggt
 1560
 tccgtggccc tgcacgtgga gaagctgccc aatgagccca accgcttgct taccctccac
 1620
 ggcttccctg acgaaaacgt gcactttttc cacacaaact tcctcgcttc ccaactgatc
 1680
 cgagcaggga aaccttacca gctccagggt gccctgcctc ctgtctcccc gcagatctac
 1740
 cccaacgaga gacacagtat tcgctgcccc gagtcgggag agcactatga agtcacgttg
 1800
 ctgcactttc tacaggaata cctctgagcc tgcccaccgg gagccgccac atcacagcac
 1860
 aagtggctgc agcctccgag gggaaccagg cgggaggagc tgagtggccc gcgggcccca
 1920
 gtgaggcact ttgtcccgcc cagcgctggc cagccccgag gagccgctgc cttcaccgac
 1980
 ccgacgcctt ttatcctttt ttaaagctc ttgggtttta tgtccgc
 2027

<210> 5384

<211> 508

<212> PRT

<213> Homo sapiens

<400> 5384

Ile Val Ser Thr Gln Glu Lys Glu Leu Val Gln Pro Phe Ser Ser Leu
 1 5 10 15
 Phe Pro Lys Val Glu Tyr Ile Ala Arg Ala Gly Ala Trp Ala Met Phe
 20 25 30
 Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu Leu Pro Pro Ala
 35 40 45
 Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg Leu Ala Ser Ala

```

65      70      75      80
Gly Arg Met Asp Asp Val Ile Asn Ile Ser Gly His Arg Leu Gly Thr
      85      90      95
Ala Glu Ile Glu Asp Ala Ile Ala Asp His Pro Ala Val Pro Glu Ser
      100     105     110
Ala Val Ile Gly Tyr Pro His Asp Ile Lys Gly Glu Ala Ala Phe Ala
      115     120     125
Phe Ile Val Val Lys Asp Ser Ala Gly Asp Ser Asp Val Val Val Gln
      130     135     140
Glu Leu Lys Ser Met Val Ala Thr Lys Ile Ala Lys Tyr Ala Val Pro
145     150     155     160
Asp Glu Ile Leu Val Lys Arg Leu Pro Lys Thr Arg Ser Gly Lys
      165     170     175
Val Met Arg Arg Leu Leu Arg Lys Ile Ile Thr Ser Glu Ala Gln Glu
      180     185     190
Leu Gly Asp Thr Thr Thr Leu Glu Asp Pro Ser Ile Ile Ala Glu Ile
      195     200     205
Leu Ser Val Tyr Gln Lys Cys Lys Asp Lys Gln Ala Ala Ala Lys
      210     215     220

```

<210> 5383

<211> 2027

<212> DNA

<213> Homo sapiens

<400> 5383

```

gttgcttcct gtatctcttc tcaagacggc ttccctctat gtgtctatgt ctatgtgtcc
60
ccctgtaagg acagcagtc tgcctggatca gggcccaccc tcattccacac aacctgtgtc
120
taactcagta catctccagt ggccccattt ccaaagaagg ttgcgttctg gggttctggg
180
ggctgagact ccagcatatg aatttggggg ggacatgatg ggaccagcg cagtggcctt
240
ctcctccgag cagcgccggg caggccaggg catgaccac acctgtttgt ttcccttcag
300
atcgtctcga cccaggagaa ggagctggtg cagcccttca gctcgtgtt cccgaagggt
360
gagtacatcg ccagggccgg cgctggggc atgttcttg accggcccca gcagtggctc
420
cagctcgtcc tcctccccc ggccctgttc atcccagca cagagaatga ggagcagcg
480
ctagcctctg ccagagctgt cccaggaat gtccagcgt atgtggtgta cgaggaggtc
540
accaacgtct ggatcaatgt tcatgacatc ttctatccct tccccaatc agagggagag
600
gacgagctct gctttctccg cgccaatgaa tgcaagaccg gcttctgcca tttgtacaaa
660
gtcaccgccc ttttaaaatc ccagggctac gattggagtg agcccttcag ccccggggaa
720
ggtgagcaga gcctgacgaa tgctatctgg gtcaatgagg agaccaagct ggtgtacttc
780
cagggcacca aggacacgcc gctggagcac cacctctacg tggtcagcta tgaggcggcc
840

```

gatgagatcc tgggtggtgaa acgtcttcca aaaaccaggt ctgggaaggt catgcggcgg
 540
 ctcttgagga agatcatcac tagtgaggcc caggagctgg gagacactac caccttggag
 600
 gaccccagca tcatcgaga gatcctgagt gtctaccaga agtgcaagga caagcagget
 660
 gctgctaagt gagctggcac cttgtggggc tcttgggatg ggcgggcacc caagccctgg
 720
 cttgtccttc ccagaaggta cccctgaggt tggcgtcttc ctacgtccca gaagcagccc
 780
 ccaccccaca catgaccac accgcctca cgtgaagctg ggctgagagc cctttctccc
 840
 atccattgga ggtcccagga gtgtcaccca tggagaggct atgcgacatg gctagggctg
 900
 gttctgcat ctgagtttg tttcctggaa tgaaaaggca ttgcatctc cattcctctg
 960
 cctcttgag ccagcacagg aaggtgaggc cctgggatag cgcgctgct cagataaac
 1020
 agagctagtt agctagtagc aaccgtgttt tctccagatc tgtctagata caaaggtcag
 1080
 aaatcttatt tttatacttt tatattgttg aagaacagca tgcaacactc acatgtagt
 1140
 tgtggattta cttgaacatg ttctttttaa catgtagtta tgaaaatctc cttttttgcc
 1200
 tctactggtg aggaacatg aggatcagag gccacatttt taattattgt tagtgtattt
 1260
 ggaagtctga attggagatg tttgtacctc tgtctaaaca gttcccttga ggacttccaa
 1320
 gcctccggca tcttttctg gtgagtgttt ctctgtgct tggttgtgta taatggagct
 1380
 aactcctaag cgggtggggtg aatgtggccg ccttagttct gaagctactc cagttatgtt
 1440
 ctgtttcttc aagctgtgat ccagaaagat ttttgtgcc cccagatgct tcttgatagg
 1500
 agaggcaaca tactccaaat agttgggttc ttcagggaag ctattagaaa ctcagggtgac
 1560
 ttgttagagc actaac
 1576

<210> 5382

<211> 223

<212> PRT

<213> Homo sapiens

<400> 5382

Xaa	Met	Ala	Met	Arg	Pro	Phe	Phe	Gly	Ile	Val	Pro	Val	Leu	Met	Asp
1				5				10					15		
Glu	Lys	Gly	Ser	Val	Val	Glu	Gly	Ser	Asn	Val	Ser	Gly	Ala	Leu	Cys
			20					25					30		
Ile	Ser	Gln	Ala	Trp	Pro	Gly	Met	Ala	Arg	Thr	Ile	Tyr	Gly	Asp	His
		35					40					45			
Gln	Arg	Phe	Val	Asp	Ala	Tyr	Phe	Lys	Ala	Tyr	Pro	Gly	Tyr	Tyr	Phe
	50					55					60				
Thr	Gly	Asp	Gly	Ala	Tyr	Arg	Thr	Glu	Gly	Gly	Tyr	Tyr	Gln	Ile	Thr

660 665 670
 Pro Pro Ser Phe Gln Pro Ser Ser Pro Ala Pro Val Trp Arg Ser Ser
 675 680 685
 Leu Gly Pro Pro Ala Pro Leu Asp Arg Gly Glu Asn Leu Tyr Tyr Glu
 690 695 700
 Ile Gly Ala Ser Glu Gly Ser Pro Tyr Ser Gly Pro Thr Arg Ser Trp
 705 710 715 720
 Ser Pro Phe Arg Ser Met Pro Pro Asp Arg Leu Asn Ala Ser Tyr Gly
 725 730 735
 Met Leu Gly Gln Ser Pro Pro Leu His Arg Ser Pro Asp Phe Leu Leu
 740 745 750
 Ser Tyr Pro Pro Ala Pro Ser Cys Phe Pro Pro Asp His Leu Gly Tyr
 755 760 765
 Ser Ala Pro Gln His Pro Ala Arg Arg Pro Thr Pro Pro Glu Pro Leu
 770 775 780
 Tyr Val Asn Leu Ala Leu Gly Pro Arg Gly Pro Ser Pro Ala Ser Ser
 785 790 795 800
 Ser Ser Ser Ser Pro Pro Ala His Pro Arg Ser Arg Ser Asp Pro Gly
 805 810 815
 Pro Pro Val Pro Arg Leu Pro Gln Lys Gln Arg Ala Pro Trp Gly Pro
 820 825 830
 Arg Thr Pro His Arg Val Pro Gly Pro Trp Gly Pro Pro Glu Pro Leu
 835 840 845
 Leu Leu Tyr Arg Ala Ala Pro Pro Ala Tyr Gly Arg Gly Gly Glu Leu
 850 855 860
 His Arg Gly Ser Leu Tyr Arg Asn Gly Gly Gln Arg Gly Glu Gly Ala
 865 870 875 880
 Gly Pro Pro Pro Pro Tyr Pro Thr Pro Ser Trp Ser Leu His Ser Glu
 885 890 895
 Gly Gln Thr Arg Ser Tyr Cys
 900

<210> 5381

<211> 1576

<212> DNA

<213> Homo sapiens

<400> 5381

nccatggcga tgaggccctt ctttggcatc gtccccgtcc tcatggatga gaagggcagc
 60
 gtcgtggagg gcagcaacgt ctccggggcc ctgtgcatct cccaggcctg gccgggcatg
 120
 gccaggacca tctatggcga ccaccagcga tttgtggacg cctacttcaa ggcctacca
 180
 ggctattact tcactggaga cggggcttac cgaactgagg gcggctatta ccagatcaca
 240
 gggcggtatg atgatgtcat caacatcagt ggccaccggc tggggaccgc agagattgag
 300
 gacgccatcg ccgaccaccc tgcagtacca gaaagtgtg tcatgggta cccccacgac
 360
 atcaaaggag aagctgcctt tgccttcatt gtggtgaaag atagtgcggg tgactcagat
 420
 gtggtggtgc aggagctcaa gtccatggtg gccaccaaga tcgccaata tgctgtgcct
 480

```

225          230          235          240
Leu Thr His Val Asp Val Leu Phe Ser Asp Thr Phe Thr Ser Ala Gly
245          250          255
Leu Asp Pro Ala Gly Arg Cys Leu Leu Pro Arg Pro Lys Ser Leu Ala
260          265          270
Gly Ser Cys Pro Ser Thr Arg Leu Leu Thr Leu Glu Glu Ala Gln Ala
275          280          285
Arg Thr Gln Gly Arg Leu Gly Thr Pro Thr Glu Pro Thr Thr Pro Lys
290          295          300
Ala Pro Ala Ser Pro Ala Glu Arg Arg Lys Gly Glu Arg Gly Glu Lys
305          310          315          320
Gln Arg Lys Pro Gly Gly Ser Ser Trp Lys Thr Phe Phe Ala Leu Gly
325          330          335
Arg Gly Pro Ser Val Pro Arg Lys Lys Pro Leu Pro Trp Leu Gly Gly
340          345          350
Thr Arg Ala Pro Pro Gln Pro Ser Ala Trp Leu Asp Asp Gly Asp Glu
355          360          365
Leu Asp Phe Ser Pro Pro Arg Cys Leu Glu Gly Leu Arg Gly Leu Asp
370          375          380
Phe Asp Pro Leu Thr Phe Arg Cys Ser Ser Pro Thr Pro Gly Asp Pro
385          390          395          400
Ala Pro Pro Ala Ser Pro Ala Pro Pro Ala Pro Ala Ser Ala Phe Pro
405          410          415
Pro Arg Val Thr Pro Gln Ala Ile Ser Pro Arg Gly Pro Thr Ser Pro
420          425          430
Ala Ser Pro Ala Ala Leu Asp Ile Ser Glu Pro Leu Ala Val Ser Val
435          440          445
Pro Pro Ala Val Leu Glu Leu Leu Gly Ala Gly Gly Ala Pro Ala Ser
450          455          460
Ala Thr Pro Thr Pro Ala Leu Ser Pro Gly Arg Ser Leu Arg Pro His
465          470          475          480
Leu Ile Pro Leu Leu Arg Gly Ala Glu Ala Pro Leu Thr Asp Ala
485          490          495
Cys Gln Gln Glu Met Cys Ser Lys Leu Arg Gly Ala Gln Gly Pro Leu
500          505          510
Ala Arg Leu Met Ala Leu Ala Leu Ala Glu Arg Ala Gln Gln Val Ala
515          520          525
Glu Gln Gln Ser Gln Gln Glu Cys Gly Gly Thr Pro Pro Ala Ser Gln
530          535          540
Ser Pro Phe His Arg Ser Leu Ser Leu Glu Val Gly Gly Glu Pro Leu
545          550          555          560
Gly Thr Ser Gly Ser Gly Pro Pro Pro Asn Ser Leu Ala His Pro Gly
565          570          575
Ala Trp Val Pro Gly Pro Pro Pro Tyr Leu Pro Arg Gln Gln Ser Asp
580          585          590
Gly Ser Leu Leu Arg Ser Gln Arg Pro Met Gly Thr Ser Arg Arg Gly
595          600          605
Leu Arg Gly Pro Ala Gln Val Ser Ala Gln Leu Arg Ala Gly Gly Gly
610          615          620
Gly Arg Asp Ala Pro Glu Ala Ala Ala Gln Ser Pro Cys Ser Val Pro
625          630          635          640
Ser Gln Val Pro Thr Pro Gly Phe Phe Ser Pro Ala Pro Arg Glu Cys
645          650          655
Leu Pro Pro Phe Leu Gly Val Pro Lys Pro Gly Leu Tyr Pro Leu Gly

```

accccata ggggtgccggg tccctggggc cctcctgagc ctctcctgct ctacagggca
 2760
 gccccgccag cctacggaag ggggggagag ctccaccgag ggtccttgta cagaaatgga
 2820
 gggcaaagag gggagggggc tgggtcccca ccccttacc ccactcccag ctgggtccctc
 2880
 cactctgagg gccagaccg aagctactgc tgagcaccag ctgggagggg ccgtccttcc
 2940
 ttcccttcac cctcactgga tcttgggcca accaaatccc ttgttttgta ttttcttgaa
 3000
 ccccgaccac taccaggt ttctaacttt gtaacttgct tctgatgtgg gtccctaacc
 3060
 tataatctca gcttccctac cctggactga agggctctgcc catcccccca ccaccctcca
 3120
 tcctgggggc cctgcacaa atctggggtg ggaggggcta ggctgacccc atcctcctct
 3180
 ccctccagga gccccagca tgcctgacc tgt
 3213

<210> 5380

<211> 903

<212> PRT

<213> Homo sapiens

<400> 5380

Met	Pro	Pro	Thr	Glu	Asp	Arg	Ser	Trp	Trp	Arg	Gly	Lys	Arg	Gly	Phe
1				5				10						15	
Gln	Leu	Cys	His	Gly	Leu	Val	Gly	Ser	Trp	Pro	Ala	Cys	Ser	Ala	Pro
		20						25					30		
Ser	Cys	Ala	Pro	Ala	Leu	Leu	Gly	Ser	Gly	Cys	Gly	Ser	Gly	Glu	Ser
		35					40					45			
Cys	Asp	Arg	Gly	Cys	Leu	Ala	Ala	Ile	Leu	Ala	Ser	Thr	Ser	Ala	Thr
	50					55					60				
Gln	Ala	Arg	Met	Val	Leu	Arg	Cys	Cys	Ser	Glu	Phe	Ile	Glu	Ala	His
	65				70					75				80	
Gly	Val	Val	Asp	Gly	Ile	Tyr	Arg	Leu	Ser	Gly	Val	Ser	Ser	Asn	Ile
			85					90						95	
Gln	Arg	Leu	Arg	His	Glu	Phe	Asp	Ser	Glu	Arg	Ile	Pro	Glu	Leu	Ser
		100						105					110		
Gly	Pro	Ala	Phe	Leu	Gln	Asp	Ile	His	Ser	Val	Ser	Ser	Leu	Cys	Lys
		115				120						125			
Leu	Tyr	Phe	Arg	Glu	Leu	Pro	Asn	Pro	Leu	Leu	Thr	Tyr	Gln	Leu	Tyr
	130					135					140				
Gly	Lys	Phe	Ser	Glu	Ala	Met	Ser	Val	Pro	Gly	Glu	Glu	Glu	Arg	Leu
	145				150					155				160	
Val	Arg	Val	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg
			165					170					175		
Thr	Leu	Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser
		180					185						190		
Ala	Asn	Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro
		195				200						205			
Asn	Leu	Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala
	210					215					220				
Ala	Ala	Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu

ctggggacgc ccacggagcc cacaactccc aaggcccccg cctcacctgc ggaaaggagg
1140
aaaggggaga gaggggagaa gcagcggaag ccagggggca gcagctggaa gacgttcttt
1200
gcactgggccc ggggccccag tgtccctcga aagaagcccc tgccctggct ggggggcacc
1260
cgtgccccac cgcagccttc agcctggcta gatgatggtg atgagctgga cttcagccca
1320
ccccgctgcc tggagggact ccgggggctg gactttgatc ccttaacctt ccgctgcagc
1380
agccccaccc caggggatcc cgcacctccc gccagcccag cccccccgc ccctgcctct
1440
gccttccccac ccagggtgac cccccaggcc atctcgcccc gggggccccc cagccccgcc
1500
tcgctgctg ccctagacat ctcaagcccc ctggctgtat cagtgccacc cgctgtccta
1560
gaactgctgg gggctggggg agcacctgcc tcagccaccc caacaccagc tctcagcccc
1620
ggccggagcc tgcgccccca tctcataccc ctgctgctgc gaggagccga ggccccgctg
1680
actgacgct gccagcagga gatgtgcagc aagctccggg gagcccaggg ccactcgca
1740
cgcctcatgg ccctggccct ggctgagcgg gctcagcagg tggccgagca acagagccag
1800
caggagtgtg ggggcacccc acctgcttcc caatccccct tccaccgctc gctgtctctg
1860
gaggtgggcg gggagccccct ggggacctca gggagtgggc cacctcccaa ctccctagca
1920
cacccgggtg cctgggtccc gggacccccca ccctacttac caaggcaaca aagtgatggg
1980
agcctgctga ggagccagcg gcccatgggg acctcaagga ggggactccg aggcctgccc
2040
caggtcagtg ccagctcag ggcaggtggc gggggcaggg atgcgccaga ggcagcagcc
2100
cagtcgccat gttctgtccc ctacaggtt cctacccccg gcttcttctc ccagcccc
2160
agggagtgcc tgccaccctt cctcggggtc cccaagccag gcttgtacc cctgggcccc
2220
ccatccttcc agcccagttc ccagcccca gtctggagga gctctctggg cccccctgca
2280
ccactcgaca ggggagagaa cctgtactat gagatcgggg caagtgaggg gtccccctat
2340
tctggcccca ccgctcctg gagtcccttt cgctccatgc cccccgacag gctcaatgcc
2400
tctacggca tgcttgcca atcaccccca ctccacaggt cccccgactt cctgctcagc
2460
taccgcccag cccctcctg ctttccccct gaccacctg gctactcagc cccccagcac
2520
cctgctcggc gccctacacc gctgagccc ctctacgtca acctagctct agggcccagg
2580
ggtcctcac ctgcctcttc ctctctctt tccccctctg cccacccccg aagccgttca
2640
gateccggtc cccagtcct ccgcttccc cagaaacaac gggcacccctg gggaccccg
2700

290 295 300
 Lys Thr Ile Ala Leu Asn Gly Val Glu Asp Val Arg Thr Val Leu Glu
 305 310 315 320
 His Tyr Ala Leu Glu Asp Asp Pro Leu Ala Ala Phe Lys Gln Arg Gln
 325 330 335
 Ser Arg Leu Glu Gln Glu Glu Gln Gln Arg Leu Ala Glu Leu Ser Lys
 340 345 350
 Ser Asn Lys Gln Asn Leu Phe Leu Gly Ser Leu Thr Ser Arg Leu Trp
 355 360 365
 Pro Arg Ser Lys Gln Pro
 370

<210> 5379

<211> 3213

<212> DNA

<213> Homo sapiens

<400> 5379

naggcgtcac tcaatatccc tgcagtggcg gccgcccattg tgatcaaacg gtatacagcc
 60
 caggcgccag atgagctgtc ctttgagggtg aggcgtgtggg gaagcagatt ccagctgggc
 120
 tccccacacc cctgtctcct tctgaccctt ctcttcccac ccgcctctc ccaggtggga
 180
 gacattgtct cggatgatga catgccaccc acagaggatc ggagctgggtg gcggggcaag
 240
 cgaggcttcc agctgtgcca cggcctcgtg ggaagctggc cggcctgctc cgcaccttca
 300
 tgcgctcccg cccttctcgg cagcggtgtc ggcagcgggg aatcctgca cagaggggtg
 360
 ttggctgca tcttgccgag cacctcagca actcaggcca ggatgggtgct gcgctgctgc
 420
 tccgagttca ttgaggccca cgggggtgggtg gatgggatct accggctctc aggcgtgtct
 480
 tccaacatcc agaggcttcg gcacagattt gacagtgaga ggatcccga gctgtctggc
 540
 cctgcattcc tgcaggacat ccacagcgtg tcttccctct gcaagctcta cttccgagag
 600
 cttccgaacc ctctgtcac ctaccagctc tatgggaagt tcagtgaggc catgtcagtg
 660
 cctggggagg aggagcgtct ggtgcgggtg cacgatgtca tccagcagct gccccacca
 720
 cattacagga ccctggagta cctgctgagg cacctggccc gcatggcgag acacagtgcc
 780
 aacaccagca tgcatgcccg caacctggcc attgtctggg cacccaacct gctacgggtc
 840
 atggagctgg agtcagtggg aatgggtggc gcggcggcgt tccgggaagt tcgggtgcag
 900
 tcgggtgggtg tggagtttct gtcacccat gtggacgtcc tgttcagcga caccttcacc
 960
 tccgccggcc tcgaccctgc aggcgcgtgc ctgctcccca ggcccaagtc ccttgccggc
 1020
 agctgccctt ccaccgcct gctgacgtg gaggaagccc aggcacgcac ccagggccgg
 1080

gtccaataaa gtacatccca gacgccacac ctgctgtgtc ccgagagtct ccagatgggg
 1260
 gcacacagggt gaggtccggg actcttgggt catcgcccca cagtggctga tcggctgccca
 1320
 agcacagtgg ggggtgcttg ttggatcaga gcagattttt caccctgggc tcggaatcta
 1380
 aaaaccctcg ctgtgtcttc ctgtgtgttg cgtgatctgt gaaaaatata tctccctctg
 1440
 accaaaaaaa aa
 1452

<210> 5378

<211> 374

<212> PRT

<213> Homo sapiens

<400> 5378

Xaa	Arg	Ala	Gly	Ser	Arg	Phe	Arg	His	Glu	Ile	Ser	Phe	Thr	Trp	Cys
1			5					10					15		
Pro	Ser	Met	Tyr	Leu	Val	Ala	Ala	Ser	Ala	Ala	Val	Phe	Ser	Arg	Leu
			20					25				30			
Arg	Ser	Gly	Leu	Arg	Leu	Gly	Ser	Arg	Gly	Leu	Cys	Thr	Arg	Leu	Ala
		35				40					45				
Thr	Pro	Pro	Arg	Arg	Ala	Pro	Asp	Gln	Ala	Ala	Glu	Ile	Gly	Ser	Arg
	50				55						60				
Gly	Ser	Thr	Lys	Ala	Gln	Gly	Pro	Gln	Gln	Gln	Pro	Gly	Ser	Glu	Gly
65			70					75						80	
Pro	Ser	Tyr	Ala	Lys	Lys	Val	Ala	Leu	Trp	Leu	Ala	Gly	Leu	Leu	Gly
			85					90						95	
Ala	Gly	Gly	Thr	Val	Ser	Val	Val	Tyr	Ile	Phe	Gly	Asn	Asn	Pro	Val
			100					105					110		
Asp	Glu	Asn	Gly	Ala	Lys	Ile	Pro	Asp	Glu	Phe	Asp	Asn	Asp	Pro	Ile
	115						120					125			
Leu	Val	Gln	Gln	Leu	Arg	Arg	Thr	Tyr	Lys	Tyr	Phe	Lys	Asp	Tyr	Arg
	130					135					140				
Gln	Met	Ile	Ile	Glu	Pro	Thr	Ser	Pro	Cys	Leu	Leu	Pro	Asp	Pro	Leu
145				150					155					160	
Gln	Glu	Pro	Tyr	Tyr	Gln	Pro	Pro	Tyr	Thr	Leu	Val	Leu	Glu	Leu	Thr
			165					170						175	
Gly	Val	Leu	Leu	His	Pro	Glu	Trp	Ser	Leu	Ala	Thr	Gly	Trp	Arg	Phe
			180					185					190		
Lys	Lys	Arg	Pro	Gly	Ile	Glu	Thr	Leu	Phe	Gln	Gln	Leu	Ala	Pro	Leu
	195						200					205			
Tyr	Glu	Ile	Val	Ile	Phe	Thr	Ser	Glu	Thr	Gly	Met	Thr	Ala	Phe	Pro
	210					215					220				
Leu	Ile	Asp	Ser	Val	Asp	Pro	His	Gly	Phe	Ile	Ser	Tyr	Arg	Leu	Phe
225				230					235					240	
Arg	Asp	Ala	Thr	Arg	Tyr	Met	Asp	Gly	His	His	Val	Lys	Asp	Ile	Ser
			245					250						255	
Cys	Leu	Asn	Arg	Asp	Pro	Ala	Arg	Val	Val	Val	Val	Asp	Cys	Lys	Lys
			260					265					270		
Glu	Ala	Phe	Arg	Leu	Gln	Pro	Tyr	Asn	Gly	Val	Ala	Leu	Arg	Pro	Trp
	275						280						285		
Asp	Gly	Asn	Ser	Asp	Asp	Arg	Val	Leu	Leu	Asp	Leu	Ser	Ala	Phe	Leu

50		55		60
Ser Ser Leu Leu Lys Lys Asn Thr Cys Arg Cys His Leu Pro Arg Ile				
65	70	75	80	
Cys His Arg Pro Arg Thr Ile Ser Ile Phe Asn Pro Arg Asn His Thr				
	85	90	95	
Gly Asp Gly Trp Gly Met Phe Met Ser Pro Phe Tyr Arg Ser Gly Asp				
100	105	110		

<210> 5377

<211> 1452

<212> DNA

<213> Homo sapiens

<400> 5377

```

nctcgagctg ggtcccgatt cagacatgaa atatccttta catggtgtcc atccatgtat
60
cttgtggcgg cctcggcagc ggtgttctcg cgcttgcgaa gcgggctccg gctcggctcg
120
cggggactgt gcacgaggtt ggcgacgccc ccccgccggg cccagatca ggccgcagag
180
atcgggagcc gcgggagcac taaggcgcaa gggccacagc agcagccggg ctcagagggg
240
cccagctatg ccaaaaaagt tgcgctctgg cttgctgggc tgcttgagc tgggtggact
300
gtgagcgctg tctatatctt tggaaacaac ccggtggagc aaaatgggag caagattcct
360
gatgagttcg acaatgatcc aattctggta cagcagttgc gccggacata caaatatttc
420
aaagattata gacagatgat catcgagccc accagccctt gccttctccc agaccctctg
480
caggaaccgt actaccagcc accctacagc ctggttttgg agctcaccgg cgtcctcttg
540
catcctgagt ggtcgtggc cactggctgg aggtttaaga agcggccagg catcgagacc
600
ttgttccagc agcttgcccc tttatatgaa attgtcatct ttacgtcaga gactggcatg
660
actgcgttcc cactcattga tagtgtggac ccccatggct tcatctccta ccgcctattc
720
cgggacgcca caagatacat ggatggacac catgtaaagg atatttcatg tctgaatcgg
780
gaccagctc gagtagtagt tgtggactgc aagaaggaag ccttcgcctt gcagccctat
840
aacggcgttg ccctgcggcc ctgggacggc aactctgatg accgggtctt gttggatctg
900
tctgccttcc tcaagaccat tgcactgaat ggtgtggagg acgtgcgaac cgtgctggag
960
cactatgccc tggaggatga cccgctggcg gctttcaaac agcggcaaag ccggctagag
1020
caggaggagc agcagcgctt ggccgagctc tccaagtcca acaagcagaa cctcttctt
1080
ggctcctca ccagccgctt gtggcctcgc tccaaacagc cctgaactct gggcctctc
1140
aaactcagtg cctgggtcca gggccccagt gcttcagac caagacttgg gccaccactt
1200

```

770 775 780
 Tyr Val Leu Arg Arg His Ala Leu Ile Val Gln Gly Phe Ser Phe Leu
 785 790 795 800
 Asn Arg Tyr Leu Ser Leu Arg Gly Pro Cys Gln Glu Ser Phe Tyr Asn
 805 810 815
 Leu Gly Arg Gly Leu His Gln Leu Gly Leu Ile His Leu Ala Ile His
 820 825 830
 Tyr Tyr Gln Lys Ala Leu Glu Leu Pro Pro Leu Val Val Glu Gly Ile
 835 840 845
 Glu Leu Asp Gln Leu Asp Leu Arg Arg Asp Ile Ala Tyr Asn Leu Ser
 850 855 860
 Leu Ile Tyr Gln Ser Ser Gly Asn Thr Gly Met Ala Gln Thr Leu Leu
 865 870 875 880
 Tyr Thr Tyr Cys Ser Ile
 885

<210> 5375

<211> 526

<212> DNA

<213> Homo sapiens

<400> 5375

ctctaggaac ccctccaagt ggctcggtgt cgccctcagc ttttctaaag ggatggatga
 60
 taggggtcagg ggtagaggat ttgtgacatc tcaagtttgc agggcttccc gtgttctaag
 120
 tggtaacgat ctgtcttctg caaatgggtt acagcgtgct gctgccagtt ctgaatcccc
 180
 agtagcccg agttgggtgc agttgaaatc catttccctt tttgccttta gtgaggcatc
 240
 cccctcctcc ttattaaaga agaatacatg tcgctgcatc ttgccacgta tttgccatag
 300
 acccaggact attagcatct ttaaccacag taaccacact ggggatggct ggggaatgtt
 360
 catgtcccca ttttacagga gtggtgatta aggtcaaag gatggaggtg atggatcaaa
 420
 gtcgtctgcc aagtgggtgc agcattgggt ctcagaccga ggcccgtcta cacagtgtgt
 480
 tgcctcctcc caccacgaat gcacgtggcc cactctgccc acgcgt
 526

<210> 5376

<211> 112

<212> PRT

<213> Homo sapiens

<400> 5376

Met Asp Asp Arg Val Arg Gly Arg Gly Phe Val Ile Leu Gln Val Cys
 1 5 10 15
 Arg Ala Ser Arg Val Leu Ser Gly Asn Asp Leu Ser Ser Ala Asn Gly
 20 25 30
 Leu Gln Arg Ala Ala Ala Ser Ser Glu Ser Pro Val Ala Arg Thr Trp
 35 40 45
 Val Gln Leu Lys Ser Ile Ser Leu Phe Ala Phe Ser Glu Ala Ser Pro

Ser Gly Ile Val Leu Glu Lys Lys Thr Ser Glu Glu Gly Thr Ser Glu
 340 345 350
 355 360 365
 Glu Asn Lys Ala Pro Glu Asn Val Thr Cys Thr Ile Pro Asp Gly Val
 370 375 380
 Pro Ile Asp Ile Thr Val Lys Leu Met Val Cys Leu Val His Leu Asn
 385 390 395 400
 Ile Leu Glu Pro Leu Asn Pro Leu Leu Thr Thr Leu Val Glu Gln Asn
 405 410 415
 Pro Glu Asp Met Gly Asp Leu Tyr Leu Asp Val Ala Glu Ala Phe Leu
 420 425 430
 Asp Val Gly Glu Tyr Asn Ser Ala Leu Pro Leu Leu Ser Ala Leu Val
 435 440 445
 Cys Ser Glu Arg Tyr Asn Leu Ala Val Val Trp Leu Arg His Ala Glu
 450 455 460
 Cys Leu Lys Ala Leu Gly Tyr Met Glu Arg Ala Ala Glu Ser Tyr Gly
 465 470 475 480
 Lys Val Val Asp Leu Ala Pro Leu His Leu Asp Ala Arg Ile Ser Leu
 485 490 495
 Ser Thr Leu Gln Gln Gln Leu Gly Gln Pro Glu Lys Ala Leu Glu Ala
 500 505 510
 Leu Glu Pro Met Tyr Asp Pro Asp Thr Leu Ala Gln Asp Ala Asn Ala
 515 520 525
 Ala Gln Gln Glu Leu Lys Leu Leu Leu His Arg Ser Thr Leu Leu Phe
 530 535 540
 Ser Gln Gly Lys Met Tyr Gly Tyr Val Asp Thr Leu Leu Thr Met Leu
 545 550 555 560
 Ala Met Leu Leu Lys Val Ala Met Asn Arg Ala Gln Val Cys Leu Ile
 565 570 575
 Ser Ser Ser Lys Ser Gly Glu Arg His Leu Tyr Leu Ile Lys Val Ser
 580 585 590
 Arg Asp Lys Ile Ser Asp Ser Asn Asp Gln Glu Ser Ala Asn Cys Asp
 595 600 605
 Ala Lys Ala Ile Phe Ala Val Leu Thr Ser Val Leu Thr Lys Asp Asp
 610 615 620
 Trp Trp Asn Leu Leu Leu Lys Ala Ile Tyr Ser Leu Cys Asp Leu Ser
 625 630 635 640
 Arg Phe Gln Glu Ala Glu Leu Leu Val Asp Ser Ser Leu Glu Tyr Tyr
 645 650 655
 Ser Phe Tyr Asp Asp Arg Gln Lys Arg Lys Glu Leu Glu Tyr Phe Gly
 660 665 670
 Leu Ser Ala Ala Ile Leu Asp Lys Asn Phe Arg Lys Ala Tyr Asn Tyr
 675 680 685
 Ile Arg Ile Met Val Met Glu Asn Val Asn Lys Pro Gln Leu Trp Asn
 690 695 700
 Ile Phe Asn Gln Val Thr Met His Ser Gln Asp Val Arg His His Arg
 705 710 715 720
 Phe Cys Leu Arg Leu Met Leu Lys Asn Pro Glu Asn His Ala Leu Cys
 725 730 735
 Val Leu Asn Gly His Asn Ala Phe Val Ser Gly Ser Phe Lys His Ala
 740 745 750
 Leu Gly Gln Tyr Val Gln Ala Phe Arg Thr His Pro Asp Glu Pro Leu
 755 760 765
 Tyr Ser Phe Cys Ile Gly Leu Thr Phe Ile His Met Ala Ser Gln Lys

ctgggccaat caggagtttc ctccgcctt ccctgggaat ttcagacttg aaatagttca
 4200
 tgtaggcca gaacttcaga a
 4221

<210> 5374

<211> 886

<212> PRT

<213> Homo sapiens

<400> 5374

Met	Ser	Gly	Phe	Ser	Pro	Glu	Leu	Ile	Asp	Tyr	Leu	Glu	Gly	Lys	Ile
1				5					10					15	
Ser	Phe	Glu	Glu	Phe	Glu	Arg	Arg	Arg	Glu	Glu	Arg	Lys	Thr	Arg	Glu
		20					25						30		
Lys	Lys	Ser	Leu	Gln	Glu	Lys	Gly	Lys	Leu	Ser	Ala	Glu	Glu	Asn	Pro
		35					40					45			
Asp	Asp	Ser	Glu	Val	Pro	Ser	Ser	Ser	Gly	Ile	Asn	Ser	Thr	Lys	Ser
	50					55					60				
Gln	Asp	Lys	Asp	Val	Asn	Glu	Gly	Glu	Thr	Ser	Asp	Gly	Val	Arg	Lys
65					70					75				80	
Ser	Val	His	Lys	Val	Phe	Ala	Ser	Met	Leu	Gly	Glu	Asn	Glu	Asp	Asp
			85						90					95	
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Thr
		100					105					110			
Pro	Glu	Gln	Pro	Thr	Ala	Gly	Asp	Val	Phe	Val	Leu	Glu	Met	Val	Leu
		115					120					125			
Asn	Arg	Glu	Thr	Lys	Lys	Met	Met	Lys	Glu	Lys	Arg	Pro	Arg	Ser	Lys
	130					135					140				
Leu	Pro	Arg	Ala	Leu	Arg	Gly	Leu	Met	Gly	Glu	Ala	Asn	Ile	Arg	Phe
145					150				155					160	
Ala	Arg	Gly	Glu	Arg	Glu	Glu	Ala	Ile	Leu	Met	Cys	Met	Glu	Ile	Ile
			165					170						175	
Arg	Gln	Ala	Pro	Leu	Ala	Tyr	Glu	Pro	Phe	Ser	Thr	Leu	Ala	Met	Ile
		180					185						190		
Tyr	Glu	Asp	Gln	Gly	Asp	Met	Glu	Lys	Ser	Leu	Gln	Phe	Glu	Leu	Ile
	195					200					205				
Ala	Ala	His	Leu	Asn	Pro	Ser	Asp	Thr	Glu	Glu	Trp	Val	Arg	Leu	Ala
	210				215						220				
Glu	Met	Ser	Leu	Glu	Gln	Asp	Asn	Ile	Lys	Gln	Ala	Ile	Phe	Cys	Tyr
225					230					235				240	
Thr	Lys	Ala	Leu	Lys	Tyr	Glu	Pro	Thr	Asn	Val	Arg	Tyr	Leu	Trp	Glu
			245						250					255	
Arg	Ser	Ser	Leu	Tyr	Glu	Gln	Met	Gly	Asp	His	Lys	Met	Ala	Met	Asp
		260						265					270		
Gly	Tyr	Arg	Arg	Ile	Leu	Asn	Leu	Leu	Ser	Pro	Ser	Asp	Gly	Glu	Arg
		275				280						285			
Phe	Met	Gln	Leu	Ala	Arg	Asp	Met	Ala	Lys	Ser	Tyr	Tyr	Glu	Ala	Asn
	290				295						300				
Asp	Val	Thr	Ser	Ala	Ile	Asn	Ile	Ile	Asp	Glu	Ala	Phe	Ser	Lys	His
305					310					315				320	
Gln	Gly	Leu	Val	Ser	Met	Glu	Asp	Val	Asn	Ile	Ala	Ala	Glu	Leu	Tyr
			325						330					335	
Ile	Ser	Asn	Lys	Gln	Tyr	Asp	Lys	Ala	Leu	Glu	Ile	Ile	Thr	Asp	Phe

tgccaggaat cattctacaa tttgggccgt ggccttcac agttggggct gattcatctt
2580
gcaatccact attatcagaa ggccctggag ctccctccac ttgtggtaga gggtagata
2640
cttgaccagt tagacttacg aagagatatt gcctacaact tgtctctcat ctatcagagc
2700
agtgggaata ccggaatggc tcaaacgctt ttgtatacct attgttctat ataaagcacc
2760
gcaactgaga acagagcaat ggcagctgct gtgtgaggac cagtgtcttc tgtctcaggg
2820
cttattatctt gtaactccaa aatagaaatg acaatttcag aattaccta caaacagtgt
2880
atttattttt aatatgtgat aatgatcttg tggtagatat gcaaaattat tcctacaaaa
2940
atttgtatat tgggtctgtca ttttctcttc acattctata gtgaattgtt cccaatgttg
3000
aaatggacgt gtaagccttt gagctagctt ggagtcgaat acactatttt tcaactcac
3060
catttattca tctttgtatt taatactata gctctgtcaa tatcacatga ggcagttttt
3120
caaatacgtg taaacagagg ttgcttatta ttaaaggaaa gacaaagtgg gactctttat
3180
gatgtcatga ccatgataac taagcaccta agaaaattat ttaaaatagt tatgtggtag
3240
gcagaaagac aaataattta gttttttact tttcaccagc atgtatctta gctaccta
3300
ctgaaacatg ggaggctggg cttaattcaa aatatattgc tccaaggcaa ataaaaaat
3360
gctttatcta tatttgtggc tttctgatga aaaaatagag aagagcttgt tcaataacag
3420
gacatggttt ccatttcaag atcacaagta atataagact gggcaagtag tacgtatgga
3480
ataaaggaca tactgctgat tgataaagta aaaaactttt tttttttgtt tgtttactca
3540
tctccactat ttatttatatg ttcttgaatt taagttaaca gtacttttta gatgatatac
3600
tgtagctta ataacaactt tttagggaaa aataaatgct gtaattaatg tgcacatggg
3660
ttagtaacac ccagcccaat tgtgggaggg aaacaagtag aggccttagga tcaaagaaat
3720
aaaattggga ctattagaa attcttacca ctgtttctac tgtacacaaa actttctagt
3780
tgagcagaat ttgtatgcaa taagtaaata tattgtatac tccatgtgta taatttaa
3840
gcattttatt ttataattg aggttaactg tttcacatgc ttaattttta ctttatgcca
3900
tttataggta atggtagagg taactgagat acagtaataa gttagacttg tgtgttgga
3960
ttctgtggaa ctgagcattc tgtgtctcga gtttctctct taaattagct cactggactg
4020
tggctccagt gtctactaaa tagccgtgga ggaaataagt ctccctgttt tatgcaactga
4080
gactctgctg ctctgcatg atcacagttg atcgaggagg gactctgctc ctgaaccaac
4140

gccatggatg gttataggcg tattttaaac cttttgtctc catctgatgg cgaacgtttt
960
atgcagctgg ctagagatat ggcaaagagt tactatgaag ccaatgatgt tacttctgct
1020
attaacataa ttgatgaagc tttctcaaaa caccagggcc tagtctccat ggaagatggt
1080
aacatagcag ctgaactata tatttctaac aaacagtatg acaaagcttt ggagataatt
1140
acagatTTTT ctggaattgt gctggaaaaa aaaacttcag aagaaggcac ctcagaagag
1200
aataaagctc ctgagaatgt tacctgcact atacctgatg gcgtgccaat agatatcaca
1260
gtgaagtTga tggctgcct tgtacatctc aacattcttg aaccacttaa tcctctcttg
1320
acaacactag tagaacagaa tcctgaagat atgggagacc tatacctaga tgttgctgaa
1380
gcttttctgg atgttggtga atataattct gcacttcccc tcctcagtgc tcttgtttgc
1440
tctgaaagat acaaccttgc agtagtttgg cttegtcatg cagaatgttt aaaggcctta
1500
ggctatatgg agcgagctgc tgaaagctat ggcaaggTgg ttgatctggc cccactccat
1560
ttggatgcaa ggatttcact ttctaccctt cagcagcagc tgggccagcc tgagaaagct
1620
ctggaagctc tggaaccaat gtatgatcca gatactttag cacaggatgc aaatgctgca
1680
cagcaggaac tgaagttatt gcttcacgt tctactctgt tgttttcaca aggcaaaatg
1740
tatggttatg tggatacctt acttactatg ttagccatgc ttttaaaggt agcaatgaat
1800
cgagcccaag ttgtttgat atccagttcc aagtctggag agaggcatct ttatcttatt
1860
aaagtatcga gagacaaaat atcagacagc aatgaccaag agtcagcaaa ttgtgatgca
1920
aaagcaatat ttgctgtgct cacaagcgtc ttgacaaagg atgactggtg gaatcttctg
1980
ttgaaggcca tatactcctt atgtgaccta tcccgatttc aagaggctga gttgcttgta
2040
gattcctcat tggaatatta ctcatTTtat gatgacaggc aaaaacgcaa agaactagaa
2100
tactttggtc tgtctgctgc aattctggac aaaaatttca gaaaggcata caactatac
2160
aggataatgg taatggaaaa tgtcaataaa cccagctct ggaacatttt caatcaagtt
2220
accatgcact cccaagatgt acgacatcat cgcttctgtc tccgtttgat gctgaaaaac
2280
ccagaaaatc atgccctatg tgtcttaaat ggacacaatg catttgatc tggtagtttt
2340
aagcatgcgc ttggacagta tgtgcaagcc tttegcactc accctgacga acctctctat
2400
agcttctgta taggcctaac ctttattcat atggcatctc agaagtatgt gttacggaga
2460
catgctctta ttgtacaggg cttttccttt cttaatcgat acctcagttt acgtgggccc
2520

```
<210> 5373
<211> 4221
<212> DNA
<213> Homo sapiens
```

4551

ggcatggcaa ccctcctcaa caagctgtat gtgatcgggg gcagcaacaa cgatgccgga
 720
 tacaggaggg acgtgcacca ggtggcctgc tacagctgca cgtctggaca gtggtcatct
 780
 gtctgcccac tccctgctgg gcacggtag cctggcattg ctgtgctgga caacaggatc
 840
 tatgtgttag gtggccgctc acacaaccgc ggcagccgca caggtacgt gcacatttac
 900
 gatgtggaga aggactgctg ggaggaaggg cccagctgg acaactccat ctcaggcctg
 960
 gcggcctgtg tgctcaccct gcccgcctcc ctgctccttg agccgccccg cgggaccct
 1020
 gaccgcagcc aggcgcagcc ggactttgcc tctgaggtga tgagtgtgtc tgactgggag
 1080
 gagtttgaca actccagtga ggactaggct cctgtgcct ggcacagag ggaagggagg
 1140
 ctggggctgc agggcagtga aaccacgca gcctagg
 1177

<210> 5372

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5372

Xaa	His	Ser	Ala	Ser	Ala	Leu	Met	Tyr	His	Arg	Asn	Glu	Ser	Leu	Gln
1				5					10					15	
Pro	Ser	Leu	Gln	Ser	Pro	Gln	Thr	Glu	Leu	Arg	Ser	Asp	Phe	Gln	Cys
		20						25					30		
Val	Val	Gly	Phe	Gly	Gly	Ile	His	Ser	Thr	Pro	Ser	Thr	Val	Leu	Ser
		35				40					45				
Asp	Gln	Ala	Lys	Tyr	Leu	Asn	Pro	Leu	Leu	Gly	Glu	Trp	Lys	His	Phe
	50					55					60				
Thr	Ala	Ser	Leu	Ala	Pro	Arg	Met	Ser	Asn	Gln	Gly	Ile	Ala	Val	Leu
65					70					75				80	
Asn	Asn	Phe	Val	Tyr	Leu	Ile	Gly	Gly	Asp	Asn	Asn	Val	Gln	Gly	Phe
		85						90					95		
Arg	Ala	Glu	Ser	Arg	Cys	Trp	Arg	Tyr	Asp	Pro	Arg	His	Asn	Arg	Trp
		100						105				110			
Xaa	Pro	Asp	Pro	Val	Pro	Ala	Ala	Gly	Ala	Arg	Arg	Pro	Val	Xaa	Val
	115					120						125			
Cys	Val	Val	Gly	Arg	Tyr	Ile	Tyr	Ala	Val	Ala	Gly	Arg	Asp	Tyr	His
	130					135					140				
Asn	Asp	Leu	Asn	Ala	Val	Glu	Arg	Tyr	Asp	Pro	Ala	Thr	Asn	Ser	Trp
145				150					155					160	
Ala	Tyr	Val	Ala	Pro	Leu	Lys	Arg	Glu	Val	Tyr	Ala	His	Ala	Gly	Ala
		165						170				175			
Thr	Leu	Glu	Gly	Lys	Met	Tyr	Ile	Thr	Cys	Gly	Arg	Arg	Gly	Glu	Asp
	180							185				190			
Tyr	Leu	Lys	Glu	Thr	His	Cys	Tyr	Asp	Pro	Gly	Ser	Asn	Thr	Trp	His
	195					200						205			
Thr	Leu	Ala	Asp	Gly	Pro	Val	Arg	Arg	Ala	Trp	His	Gly	Met	Ala	Thr
	210					215						220			
Leu	Leu	Asn	Lys	Leu	Tyr	Val	Ile	Gly	Gly	Ser	Asn	Asn	Asp	Ala	Gly

<211> 148
 <212> PRT
 <213> Homo sapiens

<400> 5370
 Met Lys Asp Leu Asp Ala Ile Lys Leu Phe Val Gly Gln Ile Pro Arg
 1 5 10 15
 His Leu Asp Glu Lys Asp Leu Lys Pro Leu Phe Glu Gln Phe Gly Arg
 20 25 30
 Ile Tyr Glu Leu Thr Val Leu Lys Asp Pro Tyr Thr Gly Met His Lys
 35 40 45
 Gly Gly Arg Pro Ala Pro Ser Pro Leu Ser Pro Ser Leu Arg Leu Pro
 50 55 60
 Pro His Leu Pro Ala Ser Ser Leu Pro His His His Pro Ser Ser Ala
 65 70 75 80
 His Leu Pro Pro Leu Pro Ala Ser Ala Gly Ala Ser Val Leu Thr Pro
 85 90 95
 Ser Leu Pro Pro Thr Pro Pro Pro Leu Ser Gly Gly Ala Ala Asp Arg
 100 105 110
 Ser Glu Arg Ala Pro Ser Pro Pro Pro Pro Leu Pro Pro Ser Pro
 115 120 125
 Pro Ser Gly Ile Ser Ser Leu Ser Pro Ser Leu Ser Pro Ser Leu Ser
 130 135 140
 Pro Phe Leu Phe
 145

<210> 5371
 <211> 1177
 <212> DNA
 <213> Homo sapiens

<400> 5371
 nnacacagtg ccagcgccct catgtaccac cggaacgaga gcctacagcc cagcctgcag
 60
 agcccgcaaa cggagctgcg gtcggacttc cagtgcgttg tgggcttcgg gggcattcac
 120
 tccacgccgt ccactgtcct cagcgaccag gccaaagtatc taaaccctt actgggagag
 180
 tggaagcact tcaactgcct cctggcccc cgcatgtcca accagggcat cgcggtgctc
 240
 aacaacttcg tatacttgat tggaggggac aacaatgtcc aaggatttcg agcagagtc
 300
 cgatgctgga ggtatgaccc acggcacaa cgctggnttc cagatccagt ccctgcagca
 360
 ggagcacgcc gacctgtcnn cgtgtgtgtt gtaggcaggt acatctacgc tgtggcgggc
 420
 cgtgactacc acaatgacct gaatgctgtg gagcgctacg accctgccac caactcctgg
 480
 gcatacgtgg cccactcaa gagggaggtg tatgccacg caggcgcgac gctggagggg
 540
 aagatgtata tcacctgcgg ccgcagaggg gaggattacc tgaaagagac aactgctac
 600
 gatccaggca gcaacacttg gcacacactg gctgatgggc ctgtgcggcg cgctggcac
 660

<211> 137
 <212> PRT
 <213> Homo sapiens

<400> 5368
 Met Leu Pro Pro Lys Pro Pro Thr Phe Gly Glu Phe Leu Ser Gln His
 1 5 10 15
 Lys Ala Glu Ala Ser Ser Arg Arg Arg Arg Lys Ser Ser Arg Pro Gln
 20 25 30
 Ala Lys Ala Ala Pro Arg Ala Tyr Ser Asp His Asp Asp Arg Trp Glu
 35 40 45
 Thr Lys Glu Gly Ala Ala Ser Pro Ala Pro Glu Thr Pro Gln Pro Thr
 50 55 60
 Ser Pro Glu Thr Ser Pro Lys Glu Thr Pro Met Gln Pro Pro Glu Ile
 65 70 75 80
 Pro Ala Pro Ala His Arg Pro Pro Glu Asp Glu Gly Glu Glu Asn Glu
 85 90 95
 Gly Glu Glu Asp Glu Glu Trp Glu Asp Ile Ser Glu Asp Glu Glu Glu
 100 105 110
 Glu Glu Ile Glu Val Glu Glu Gly Asp Glu Glu Glu Pro Ala Gln Asp
 115 120 125
 His Gln Ala Pro Glu Ala Ala Pro Thr
 130 135

<210> 5369
 <211> 646
 <212> DNA
 <213> Homo sapiens

<400> 5369
 ngggaggcgg gaggcgcggc cgccgctcca gctgcgagtc cgcccgccgc ccgccgcgcg
 60
 cgccgcgcgc tcggtcccgc gcccgccatg gccgcctga cggagagcga ggcgcgcgcg
 120
 cagcagcagc agctcctgca gccgcggccc tcgcccgtgg gcagcagcgg gcccgagccc
 180
 cccggggggc agcccgacgg catgaaggac ctggacgcca tcaaactctt cgtggggccag
 240
 atccccgcgc acctggacga gaaggacctc aagccgctct tcgagcagtt cggccgcctc
 300
 tacgagctca cggtgctcaa agacccttac acgggggatgc acaaagggtg gcgccccggc
 360
 cctccccccc tctccccctc cctccgcctc ccacccacc ttccggcctc ttctctcccc
 420
 catcaccatc cctcctctgc tcacctccct cctctgcttg cctctgcggg agcatcggtt
 480
 cttacccctc cctccccacc caccctcctt cccctctctg ggggtgcagc tgacagatcc
 540
 gaggcggggc cctccccctc tcgcggcctt ctccctccct cccaccttc cggcatctcc
 600
 tctctctctc cctctctctc tcctctctc tctcccttc tcttct
 646

<210> 5370

```

      275              280              285
Val Leu Arg Gly Phe Leu Glu Asp Val Val Pro Asp Ala Thr Ser Ala
      290              295              300
Tyr Pro Tyr Leu Leu Leu Tyr Glu Ser Arg Gln Arg Arg Tyr Leu Gly
305              310              315              320
Ser Ser Pro Glu Gly Ser Gly Phe Cys Ser Lys Asp Arg Phe Val Ala
      325              330              335
Tyr Pro Cys Ala Val Gly Gln Thr Ala Phe Ser Ser Gly Arg His Tyr
      340              345              350
Trp Glu Val Gly Met Asn Ile Thr Gly Asp Ala Leu Trp Ala Leu Gly
      355              360              365
Val Cys Arg Asp Asn Val Ser Arg Lys Asp Arg Val Leu Lys Cys Pro
      370              375              380
Glu Asn Gly Phe Trp Val Val Gln Leu Ser Lys Gly Thr Lys Tyr Leu
385              390              395              400
Ser Thr Phe Ser Ala Leu Thr Pro Val Met Leu Met Glu Pro Pro Ser
      405              410              415
His Met Gly Ile Phe Leu Asp Phe Glu Ala Gly Glu Val Ser Phe Tyr
      420              425              430
Ser Val Ser Asp Gly Ser His Leu His Thr Tyr Ser Gln Ala Thr Phe
      435              440              445
Pro Gly Pro Leu Gln Pro Phe Phe Cys Leu Gly Ala Pro Lys Ser Gly
      450              455              460
Gln Met Val Ile Ser Thr Val Thr Met Trp Val Lys Gly
465              470              475

```

<210> 5367

<211> 549

<212> DNA

<213> Homo sapiens

<400> 5367

```

nntctctcttc cccctcattc tcttccccct cgtcttcagg aggccggtgg gcaggagctg
60
ggatctcggg tggctgcatg cgtgtctcct tgggggaagt ctcgggggaa gtaggctgtg
120
gagtctcagg ggctggggat gctgcccccg aagcccccta cttttgggga gttcctgtcc
180
cagcaciaaag ctgaggccag cagccgcaga aggagaaaga gcagtcggcc ccaggccaag
240
gcagcgccca gggcctacag tgaccatgat gaccgctggg agacaaaaga aggggcagca
300
tccccagccc ctgagactcc acagcctact tccccgaga cttcccccaa ggagacaccc
360
atgcagccac ccgagatccc agctcctgcc caccggcctc ctgaagacga gggggaagag
420
aatgaggggg aagaggatga agaatgggag gacataagtg aggatgagga agaggaggag
480
atcgaggtgg aagaaggtga tgaggaggaa ccagcccaag accaccaagc cccagaggct
540
gccccacc
549

```

<210> 5368

cagatgggtca tctccacagt gaccatgtgg gtgaaaggat agacacagac cgggggactc
 1560
 gggcactgct cctggctctg cagaagggtg gggccttctg cttactgcag gccacctgcc
 1620
 agggttctct ggcacacgc tggcagccat tagacacaca ggggggttcc tcaaattcta
 1680
 aatataattg tgattagaac tgtcaaacat taagagggtta tactgacaga tgcttcctag
 1740
 aggaaacttt tgaaagcccc tgcgttctga gtggaccgat ttctaaatcc atacctacac
 1800
 accaaaaaaa aaaaaaagtc gagc
 1824

<210> 5366

<211> 477

<212> PRT

<213> Homo sapiens

<400> 5366

Met	Glu	Ala	Val	Glu	Leu	Ala	Arg	Lys	Leu	Gln	Glu	Glu	Ala	Thr	Cys
1				5					10					15	
Ser	Ile	Cys	Leu	Asp	Tyr	Phe	Thr	Asp	Pro	Val	Met	Thr	Thr	Cys	Gly
		20						25					30		
His	Asn	Phe	Cys	Arg	Ala	Cys	Ile	Gln	Leu	Ser	Trp	Glu	Lys	Ala	Arg
		35					40					45			
Gly	Lys	Lys	Gly	Arg	Arg	Lys	Arg	Lys	Gly	Ser	Phe	Pro	Cys	Pro	Glu
	50					55					60				
Cys	Arg	Glu	Met	Ser	Pro	Gln	Arg	Asn	Leu	Leu	Pro	Asn	Arg	Leu	Leu
65					70				75					80	
Thr	Lys	Val	Ala	Glu	Met	Ala	Gln	Gln	His	Pro	Gly	Leu	Gln	Lys	Gln
				85					90					95	
Asp	Leu	Cys	Gln	Glu	His	His	Glu	Pro	Leu	Lys	Leu	Phe	Cys	Gln	Lys
		100						105					110		
Asp	Gln	Ser	Pro	Ile	Cys	Val	Val	Cys	Arg	Glu	Ser	Arg	Glu	His	Arg
		115					120					125			
Leu	His	Arg	Val	Leu	Pro	Ala	Glu	Glu	Ala	Val	Gln	Gly	Tyr	Lys	Leu
	130					135					140				
Lys	Leu	Glu	Glu	Asp	Met	Glu	Tyr	Leu	Arg	Glu	Gln	Ile	Thr	Arg	Thr
145					150				155					160	
Gly	Asn	Leu	Gln	Ala	Arg	Glu	Glu	Gln	Ser	Leu	Ala	Glu	Trp	Gln	Gly
			165					170						175	
Lys	Val	Lys	Glu	Arg	Arg	Glu	Arg	Ile	Val	Leu	Glu	Phe	Glu	Lys	Met
		180						185				190			
Asn	Leu	Tyr	Leu	Val	Glu	Glu	Glu	Arg	Leu	Leu	Gln	Ala	Leu	Glu	
	195					200					205				
Thr	Glu	Glu	Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Glu	Ser	Val	Ala	Cys
	210					215					220				
Leu	Asp	Arg	Gln	Gly	His	Ser	Leu	Glu	Leu	Leu	Leu	Gln	Leu	Glu	
225					230				235					240	
Glu	Arg	Ser	Thr	Gln	Gly	Pro	Leu	Gln	Met	Leu	Gln	Asp	Met	Lys	Glu
			245					250					255		
Pro	Leu	Ser	Arg	Lys	Asn	Asn	Val	Ser	Val	Gln	Cys	Pro	Glu	Val	Ala
		260						265				270			
Pro	Pro	Thr	Arg	Pro	Arg	Thr	Val	Cys	Arg	Val	Pro	Gly	Gln	Ile	Glu

<212> DNA

<213> Homo sapiens

<400> 5365

cagcctttcc cggcagcgag cgctcggcca ggtgcactag gcgctgtgcg ggccccctt
60
ccccgcgagt cctcaagcg ggaacctgcc tctgtctctc caggagccat ggaggtgtg
120
gaactcgcca gaaaactgca ggaggaagct acgtgctcca tctgtctgga ttacttcaca
180
gacctgtga tgaccacctg tggccacaac ttctgccgag cctgcatcca gctgagctgg
240
gaaaaggcga ggggcaagaa ggggaggcgg aagcggaaag gctccttccc ctgccccgag
300
tgcagagaga tgtccccgca gaggaacctg ctgcccacc ggctgtgac caaggtggcc
360
gagatggcgc agcagcatcc tggctctgag aagcaagacc tgtgccagga gcaccacgag
420
ccctcaagc ttttctgcca gaaggaccag agcccatct gtgtggtgtg caggaggtcc
480
cgggagcacc ggctgcacag ggtgctgccc gccgaggagg cagtgcaggg gtacaagttg
540
aagctggagg aggacatgga gtaccttcgg gagcagatca ccaggacagg gaatctgag
600
gccagggagg agcagagctt agccgagtgg cagggcaagg tgaaggagcg gagagaacgc
660
attgtgctgg agtttgagaa gatgaacctc tacctggtgg aagaagagca gaggtcctc
720
caggctctgg agacggaaga agaggagact gccagcaggc tccgggagag cgtggcctgc
780
ctggaccggc agggctactc tctggagctg ctgctgctgc agctggagga gcggagcaca
840
caggggcccc tccagatgct gcaggacatg aaggaacccc tgagcaggaa gaacaacgtg
900
agtgtgcagt gccagaggt tgcctcccca accagaccca ggactgtgtg cagagtccc
960
ggacagattg aagtgtctag aggccttcta gaggatgtgg tgcctgatgc cacctccgcg
1020
taccctacc tctcctgta tgagagccgc cagaggcgt acctcggtc ttcccgag
1080
ggcagtgggt tctgcagcaa ggaccgattt gtggcttacc cctgtgctgt gggccagacg
1140
gccttctcct ctgggaggca ctactgggag gtgggcatga acatcaccgg ggacgcgtg
1200
tgggccctgg gtgtgtgag ggacaacgtg agccggaaag acagggtcct caagtcccc
1260
gaaaacggct tctgggtggt gcagctgtcc aaggggacca agtacttacc caccttctct
1320
gccctaacc cggtcatgct gatggagcct ccagccaca tgggcatctt cctggacttc
1380
gaagccgggg aagtgtcct ctacagtga agcgatgggt ccacactgca cacctactcc
1440
caggccacct tcccagccc cctgcagcct ttcttctgcc tgggggctcc gaagtctggt
1500

agagctgtgg ccaggagagc agcagtgtccc tgagctgtccc taccgtctcg gtgccccctg
 360
 cagccccggc agccctggag gaggtggaga aagagggcgc tggggcggct acagggcncg
 420
 gggcctcagc ccgggctcta cagctacatc agggatgact tgtttacctc tgagatcttt
 480
 aaactggagc tgcagaacgc gcctcgccac gccagcttca gcgacgtccg gcgcttcctg
 540
 ggccgctttg gtctgcagcc ccacaaaacc aaactctttg ggcaaccacc ctgcgccttt
 600
 gtgacattcc gcagcgctgc agagagggac aaggccctgc gcgttttgca tgggtgcctc
 660
 tggaaaggcc gccactcag tgtggcctgg cccggcccaa ggccgacccc atggccagga
 720
 ggagggcngac aggaggggtga gagtgcagca ccagtaacac gangtggccg acgtggtgac
 780
 ccctctatgg acagtgcctt antgctgagc agcttgagcg gaagcagctg gagtgcgagc
 840
 aggtgctgca gaaacnttgc ccaggaaaac gggagcacca accgtgcctt gcgt
 894

<210> 5364

<211> 187

<212> PRT

<213> Homo sapiens

<400> 5364

Ala	Ala	Leu	Pro	Ser	Arg	Cys	Pro	Leu	Gln	Pro	Arg	Gln	Pro	Trp	Arg
1				5					10					15	
Arg	Trp	Arg	Lys	Arg	Ala	Leu	Gly	Arg	Leu	Gln	Gly	Xaa	Gly	Pro	Gln
			20					25					30		
Pro	Gly	Leu	Tyr	Ser	Tyr	Ile	Arg	Asp	Asp	Leu	Phe	Thr	Ser	Glu	Ile
		35				40						45			
Phe	Lys	Leu	Glu	Leu	Gln	Asn	Ala	Pro	Arg	His	Ala	Ser	Phe	Ser	Asp
	50				55					60					
Val	Arg	Arg	Phe	Leu	Gly	Arg	Phe	Gly	Leu	Gln	Pro	His	Lys	Thr	Lys
65				70					75						80
Leu	Phe	Gly	Gln	Pro	Pro	Cys	Ala	Phe	Val	Thr	Phe	Arg	Ser	Ala	Ala
			85						90					95	
Glu	Arg	Asp	Lys	Ala	Leu	Arg	Val	Leu	His	Gly	Ala	Leu	Trp	Lys	Gly
		100					105					110			
Arg	Pro	Leu	Ser	Val	Ala	Trp	Pro	Gly	Pro	Arg	Pro	Thr	Pro	Trp	Pro
	115					120						125			
Gly	Gly	Gly	Xaa	Gln	Glu	Gly	Glu	Ser	Glu	Pro	Pro	Val	Thr	Arg	Xaa
	130				135						140				
Gly	Arg	Arg	Gly	Asp	Pro	Ser	Met	Asp	Ser	Ala	Leu	Xaa	Leu	Ser	Ser
145				150					155						160
Leu	Ser	Gly	Ser	Ser	Trp	Ser	Ala	Ser	Arg	Cys	Cys	Arg	Asn	Xaa	Ala
			165					170						175	
Gln	Glu	Ile	Gly	Ser	Thr	Asn	Arg	Ala	Leu	Arg					
		180						185							

<210> 5365

<211> 1824

tgctgggacc acaggcgtga gccaccgcgc ccggccgtct gtctggtttt caaaccaatc
 900
 aatgaaccgc taagcctctt tggatatat aacaatgaaa aaattcatta agccatgaaa
 960
 tctagaaata agtcatatct ctgagttgat aaaatgcttt tctgaacata catttttaggt
 1020
 atctgggcgt gctggcgggt gcctgtaatc ccagctactc ggggaggctt gagacagggg
 1080

<210> 5362

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5362

Cys	Pro	Thr	Val	Asp	Pro	Leu	Leu	Gln	Lys	Asn	Cys	Asn	Asp	Gly	Ser
1				5					10					15	
Ala	Thr	Ala	Leu	Ala	Arg	Val	Pro	Leu	His	Ala	Cys	Arg	Glu	Gly	Arg
			20					25					30		
Trp	Ala	Ser	Pro	Ser	Gly	Phe	Phe	Cys	Cys	Cys	Cys	Cys	Phe	Leu	Arg
		35				40						45			
Trp	Ser	Leu	Ala	Leu	Xaa	Ala	Gln	Thr	Glu	Val	Gln	Arg	Pro	Asp	Leu
	50					55					60				
Asn	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gly	Phe	Lys	Gly	Phe	Ser	Cys	Leu
65					70					75				80	
Ser	Leu	Leu	Ser	Ser	Trp	Asp	Tyr	Arg	His	Pro	Pro	Ala	Arg	Pro	Ala
				85				90					95		
Phe	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Leu	Ser	Cys	Trp	Pro	Gly
		100						105					110		
Trp	Ser	Arg	Thr	Pro	Asp	Leu	Met	Xaa	Ser	Thr	Arg	Leu	Gly	Leu	Pro
		115					120					125			
Asn	Cys	Trp	Asp	His	Arg	Arg	Glu	Pro	Pro	Arg	Pro	Ala	Val	Cys	Leu
	130					135					140				
Val	Phe	Lys	Pro	Ile	Asn	Glu	Pro	Val	Ser	Leu	Phe	Gly	Ile	Tyr	Asn
145					150					155				160	
Asn	Glu	Lys	Ile	His											
				165											

<210> 5363

<211> 894

<212> DNA

<213> Homo sapiens

<400> 5363

cggccggcgc gggcccctgg cgggcgggcg gtacagcccc aagcctgaga cccggacctg
 60
 agcatcgcag gttcgagtcc cgccccgcct ggggcgaagc cgggggtggc ggcgacctcg
 120
 cggcgttgca ccggctctgt gagcacctcc cctctgagca cttcccttgt gacaggccac
 180
 ttcccttgtg acaggcccag gacgaggtgg ccaggcggcc cccatggcgt ccctgggtcta
 240
 ggcggagaac cgctggggcg atgagtgaga acctcgacaa cgaggggccc aagcccatgg
 300

1250 1255 1260
 Arg Gln Ala Gln Ala Gln His Leu Gln Glu Val Arg Leu Val Pro Gln
 1265 1270 1275 1280
 Asp Arg Val Ala Glu Leu His Arg Leu Leu Ser Leu Gln Gly Glu Gln
 1285 1290 1295
 Ala Arg Arg Arg Leu Asp Ala Gln Arg Glu Glu His Glu Lys Gln Leu
 1300 1305 1310
 Lys Ala Thr Glu Glu Arg Val Glu Glu Ala Glu Met Ile Leu Lys Asn
 1315 1320 1325
 Met Glu Met Leu Leu Gln Glu Lys Val Asp Lys Leu Lys Glu Gln Phe
 1330 1335 1340
 Glu Lys Asn Thr Lys Ser Asp Leu Leu Leu Lys Glu Leu Tyr Val Glu
 1345 1350 1355 1360
 Asn Ala His Leu Val Arg Ala Leu Gln Ala Thr Glu Glu Lys Gln Arg
 1365 1370 1375
 Gly Ala Glu Lys Gln Ser Arg Leu Leu Glu Glu Lys Val Arg Ala Leu
 1380 1385 1390
 Asn Lys Leu Val Ser Arg Ile Ala Pro Ala Ala Leu Ser Val
 1395 1400 1405

<210> 5361
 <211> 1080
 <212> DNA
 <213> Homo sapiens

<400> 5361
 nngaattcct ctccaaagca gagtacgtca agttttccct ggtgtcagac agcatttcac
 60
 catgaaaccc taagacctgc ctctctgggct ccttcagct ggtgggcctg gtgtgaaggt
 120
 gggcttctctg ggctccggc agatggagga tggcattaaa tgccaacaca gtcagcttac
 180
 catccacaag gccagcagct gccaacagct gccctagacc tatcaacaag acaacttcac
 240
 ggctcccaat gggaatggag gctgggcccgc cctacttag agcaggggaa agaacttttc
 300
 cctcaaagag cgggggcagg atgccagaat ctaactacat cctctcccgc tttgcagttc
 360
 taggaagtgg aatttgctgc cctaggcgtg gtctaaagga caagtttaga aatgattcaa
 420
 ctcaagttcc taaacagagt aagtgccagt tgatgtccca ccgtggatcc tttactccag
 480
 aaaaattgta atgatggctc ggccaccgcc ttggctagag tcccactgca cgcgtgtcgt
 540
 gagggccgat gggcaagtcc gtccggtttt tttgttgtt gttgttgtt tttgagatgg
 600
 agtctgcccc tgnttgccca gactgaagtg caaaggcccc atctcaactc actgcaacct
 660
 ccgctcctg ggttcaaagg attctcctgt ctccagctcc tgagtagctg ggattacagg
 720
 caccgcccag caccgccagc ttttttttgt atttttagta gagacggggg tttatcatgt
 780
 tggccaggct ggtctgaac gcctgacctc atgnnatcca cccgccttgg cctcccaaat
 840

820 825 830
 Leu Glu Leu Ala Arg Gly Lys Arg Val Asp Gly Pro Ser Leu Glu Ala
 835 840 845
 Glu Met Gln Ala Leu Pro Lys Asp Gly Leu Val Ala Gly Ser Gly Gln
 850 855 860
 Glu Gly Thr Arg Gly Leu Leu Pro Leu Arg Pro Gly Cys Gly Glu Arg
 865 870 875 880
 Pro Leu Ala Trp Leu Ala Pro Gly Asp Gly Arg Glu Ser Glu Glu Ala
 885 890 895
 Ala Gly Ala Gly Pro Arg Arg Arg Gln Ala Gln Asp Thr Glu Ala Thr
 900 905 910
 Gln Ser Pro Ala Pro Ala Pro Ala Ser His Gly Pro Ser Glu
 915 920 925
 Arg Trp Ser Arg Met Gln Pro Cys Gly Val Asp Gly Asp Ile Val Pro
 930 935 940
 Lys Glu Pro Glu Pro Phe Gly Ala Ser Ala Ala Gly Leu Glu Gln Pro
 945 950 955 960
 Gly Ala Arg Glu Leu Pro Leu Leu Gly Thr Glu Arg Asp Ala Ser Gln
 965 970 975
 Thr Gln Pro Arg Met Trp Glu Pro Pro Leu Arg Pro Ala Ala Ser Cys
 980 985 990
 Arg Gly Gln Ala Glu Arg Leu Gln Ala Ile Gln Glu Glu Arg Ala Arg
 995 1000 1005
 Ser Trp Ser Arg Gly Thr Gln Glu Gln Ala Ser Glu Gln Gln Ala Arg
 1010 1015 1020
 Ala Glu Gly Ala Leu Glu Pro Gly Cys His Lys His Ser Val Glu Val
 1025 1030 1035 1040
 Ala Arg Arg Gly Ser Leu Pro Ser His Leu Gln Leu Ala Asp Pro Gln
 1045 1050 1055
 Gly Ser Trp Gln Glu Gln Leu Ala Ala Pro Glu Glu Gly Glu Thr Lys
 1060 1065 1070
 Ile Ala Leu Glu Arg Glu Lys Asp Asp Met Glu Thr Lys Leu Leu His
 1075 1080 1085
 Leu Glu Asp Val Val Arg Ala Leu Glu Lys His Val Asp Leu Arg Glu
 1090 1095 1100
 Asn Asp Arg Leu Glu Phe His Arg Leu Ser Glu Glu Asn Thr Leu Leu
 1105 1110 1115 1120
 Lys Asn Asp Leu Gly Arg Val Arg Gln Glu Leu Glu Ala Ala Glu Ser
 1125 1130 1135
 Thr His Asp Ala Gln Arg Lys Glu Ile Glu Val Leu Lys Lys Asp Lys
 1140 1145 1150
 Glu Lys Ala Cys Ser Glu Met Glu Val Leu Asn Arg Gln Asn Gln Asn
 1155 1160 1165
 Tyr Lys Asp Gln Leu Ser Gln Leu Asn Val Arg Val Leu Gln Leu Gly
 1170 1175 1180
 Gln Glu Ala Ser Thr His Gln Ala Gln Asn Glu Glu His Arg Val Thr
 1185 1190 1195 1200
 Ile Gln Met Leu Thr Gln Ser Leu Glu Glu Val Val Arg Ser Gly Gln
 1205 1210 1215
 Gln Gln Ser Asp Gln Ile Gln Lys Leu Arg Val Glu Leu Glu Cys Leu
 1220 1225 1230
 Asn Gln Glu His Gln Ser Leu Gln Leu Pro Trp Ser Glu Leu Thr Gln
 1235 1240 1245
 Thr Leu Glu Glu Ser Gln Asp Gln Val Gln Gly Ala His Leu Arg Leu

385 390 395 400
 Ala Ala Leu Ala Cys Tyr His Gln Glu Leu Ser Tyr Gln Gln Gly Gln
 405 410 415
 Val Glu Gln Leu Ala Arg Glu Arg Asp Lys Ala Arg Gln Asp Leu Glu
 420 425 430
 Arg Ala Glu Lys Arg Asn Leu Glu Phe Val Lys Glu Met Asp Asp Cys
 435 440 445
 His Ser Thr Leu Glu Gln Leu Thr Glu Lys Lys Ile Lys His Leu Glu
 450 455 460
 Gln Gly Tyr Arg Glu Arg Leu Ser Leu Leu Arg Ser Glu Val Glu Ala
 465 470 475 480
 Glu Arg Glu Leu Phe Trp Glu Gln Ala His Arg Gln Arg Ala Ala Leu
 485 490 495
 Glu Trp Asp Val Gly Arg Leu Gln Ala Glu Glu Ala Gly Leu Arg Glu
 500 505 510
 Lys Leu Thr Leu Ala Leu Lys Glu Asn Ser Arg Leu Gln Lys Glu Ile
 515 520 525
 Val Glu Val Val Glu Lys Leu Ser Asp Ser Glu Arg Leu Ala Leu Lys
 530 535 540
 Leu Gln Lys Asp Leu Glu Phe Val Leu Lys Asp Lys Leu Glu Pro Gln
 545 550 555 560
 Ser Ala Glu Leu Leu Ala Gln Glu Glu Arg Phe Ala Ala Val Leu Lys
 565 570 575
 Glu Tyr Glu Leu Lys Cys Arg Asp Leu Gln Asp Arg Asn Asp Glu Leu
 580 585 590
 Gln Ala Glu Leu Glu Gly Leu Trp Ala Arg Leu Pro Lys Asn Arg His
 595 600 605
 Ser Pro Ser Trp Ser Pro Asp Gly Arg Arg Arg Gln Leu Pro Gly Leu
 610 615 620
 Gly Pro Ala Gly Ile Ser Phe Leu Gly Asn Ser Ala Pro Val Ser Ile
 625 630 635 640
 Glu Thr Glu Leu Met Met Glu Gln Val Lys Glu His Tyr Gln Asp Leu
 645 650 655
 Arg Thr Gln Leu Glu Thr Lys Val Asn Tyr Tyr Glu Arg Glu Ile Ala
 660 665 670
 Ala Leu Lys Arg Asn Phe Glu Lys Glu Arg Lys Asp Met Glu Gln Ala
 675 680 685
 Arg Arg Arg Glu Val Ser Val Leu Glu Gly Gln Lys Ala Asp Leu Glu
 690 695 700
 Glu Leu His Glu Lys Ser Gln Glu Val Ile Trp Gly Leu Gln Glu Gln
 705 710 715 720
 Leu Gln Asp Thr Ala Arg Gly Pro Glu Pro Glu Gln Met Gly Leu Ala
 725 730 735
 Pro Cys Cys Thr Gln Ala Leu Cys Gly Leu Ala Leu Arg His His Ser
 740 745 750
 His Leu Gln Gln Ile Arg Arg Glu Ala Glu Ala Glu Leu Ser Gly Glu
 755 760 765
 Leu Ser Gly Leu Gly Ala Leu Pro Ala Arg Arg Asp Leu Thr Leu Glu
 770 775 780
 Leu Glu Glu Pro Pro Gln Gly Pro Leu Pro Arg Gly Ser Gln Arg Ser
 785 790 795 800
 Glu Gln Leu Glu Leu Glu Arg Ala Leu Lys Leu Gln Pro Cys Ala Ser
 805 810 815
 Glu Lys Arg Ala Gln Met Cys Val Ser Leu Ala Leu Glu Glu Glu

<211> 1406

<212> PRT

<213> Homo sapiens

<400> 5360

Gly Thr Gly Val Val Pro Arg Ser Trp Pro Arg Ala Gly Gly Arg Arg
 1 5 10 15
 Arg Arg Leu Pro Ala Cys Tyr Gly Met Asp Glu Glu Glu Asn His Tyr
 20 25 30
 Val Ser Gln Leu Arg Glu Val Tyr Ser Ser Cys Asp Thr Thr Gly Thr
 35 40 45
 Gly Phe Leu Asp Arg Gln Glu Leu Thr Gln Leu Cys Leu Lys Leu His
 50 55 60
 Leu Glu Gln Gln Leu Pro Val Leu Leu Gln Thr Leu Leu Gly Asn Asp
 65 70 75 80
 His Phe Ala Arg Val Asn Phe Glu Glu Phe Lys Glu Gly Phe Val Ala
 85 90 95
 Val Leu Ser Ser Asn Ala Gly Val Arg Pro Ser Asp Glu Asp Ser Ser
 100 105 110
 Ser Leu Glu Ser Ala Ala Ser Ser Ala Ile Pro Pro Lys Tyr Val Asn
 115 120 125
 Gly Ser Lys Trp Tyr Gly Arg Arg Ser Arg Pro Glu Leu Cys Asp Ala
 130 135 140
 Ala Thr Glu Ala Arg Arg Val Pro Glu Gln Gln Thr Gln Ala Ser Leu
 145 150 155 160
 Lys Ser His Leu Trp Arg Ser Ala Ser Leu Glu Ser Val Glu Ser Pro
 165 170 175
 Lys Ser Asp Glu Glu Ala Glu Ser Thr Lys Glu Ala Gln Asn Glu Leu
 180 185 190
 Phe Glu Ala Gln Gly Gln Leu Gln Thr Trp Asp Ser Glu Asp Phe Gly
 195 200 205
 Ser Pro Gln Lys Ser Cys Ser Pro Ser Phe Asp Thr Pro Glu Ser Gln
 210 215 220
 Ile Arg Gly Val Trp Glu Glu Leu Gly Val Gly Ser Ser Gly His Leu
 225 230 235 240
 Ser Glu Gln Glu Leu Ala Val Val Cys Gln Ser Val Gly Leu Gln Gly
 245 250 255
 Leu Glu Lys Glu Glu Leu Glu Asp Leu Phe Asn Lys Leu Asp Gln Asp
 260 265 270
 Gly Asp Gly Lys Val Ser Leu Glu Glu Phe Gln Leu Gly Leu Phe Ser
 275 280 285
 His Glu Pro Ala Leu Leu Leu Glu Ser Ser Thr Arg Val Lys Pro Ser
 290 295 300
 Lys Ala Trp Ser His Tyr Gln Val Pro Glu Glu Ser Gly Cys His Thr
 305 310 315 320
 Thr Thr Thr Ser Ser Leu Val Ser Leu Cys Ser Ser Leu Arg Leu Phe
 325 330 335
 Ser Ser Ile Asp Asp Gly Ser Gly Phe Ala Phe Pro Asp Gln Val Leu
 340 345 350
 Ala Met Trp Thr Gln Glu Gly Ile Gln Asn Gly Arg Glu Ile Leu Gln
 355 360 365
 Ser Leu Asp Phe Ser Val Asp Glu Lys Val Asn Leu Leu Glu Leu Thr
 370 375 380
 Trp Ala Leu Asp Asn Glu Leu Met Thr Val Asp Ser Ala Val Gln Gln

gagatggagg tgctcaacag acagaatcag aactacaagg atcaattatc ccagctcaat
3540
gtcagggttc ttcaactggg acaggaggct tctaccacc aggcccaaaa cgaggagcat
3600
cgtgtgacca ttcagatggt aacacagagc ctggaggagg tggttcgag tgggcagcag
3660
cagagtgacc aaatccaaaa acttagagtt gaacttgaat gcctgaatca ggaacatcag
3720
agcctgcagc tgccatggtc agagctgacc cagacccttg aggaaagtca agaccagggt
3780
cagggagctc acctgaggct gaggcaggcc caggcccagc acttgcagga ggtccggctg
3840
gtgccccagg accgtgtggc cgagctgcat cgcttgcctc gccttcaggg agagcaggcc
3900
aggaggcgcc tggatgcaca gcggaagaa catgagaaac agctgaaagc cacagaagag
3960
cgggtggaag aggcggagat gattctgaag aatatgaaa tgctcctcca agagaaagt
4020
gataagctga aggagcagtt tgaaaagaac acgaagtccg acctgctgct gaaggagctg
4080
tacgtggaga acgcccacct ggtgagagca cttcaggcca ccgaggagaa gcagcgaggc
4140
gccgagaaac aaagccgcct cttggaagaa aaagttcgct ctctcaaca actcgtcagt
4200
aggattgccc ccgcagccct ctctgtgtaa agacagatta ttttctagga ttcattcgaa
4260
agcacatctt ttaaattaag ccaactgtgct gccttagatt ccgtgggtca tgagccatga
4320
gtcctgggac atctgaggat tgggattctt tgttcacccc gcagatagtt aatgaatggt
4380
ctgccctggg caagatggag gtgggggctg ggggaatatg catgttgag aagccggcgt
4440
ttttattagc ggtcctgagt aatttccctt ggcaaaattc ccagttttgc cactctctgg
4500
agccagatcc tgggagctgt cagcaaggag caggtaagt agcagttatg gacagcactt
4560
tccatgtggt gcttccgacc ctggctgtca gagtgaatg taaagtcagg gctctgtaca
4620
gttttgccat ttcactgttc tgctttaagc ttagcttatt agaactcttg gtggagggtg
4680
cgtacacaca ttccagaaaa ggcttcactc gctgggaacg tcaaccacgc gagaaaggag
4740
gggaagcccc ttctccgggg accttatctg tggactcagg aatgatggtg tttattgcaa
4800
atgcacaatc tttttcccat tgaaatgtca tcacactgga aattgtacta tatgtaaaaa
4860
aaaaaaaaa gtatagtttt atatttgaaa tgtatgcaa ttatggccat atggctgatt
4920
ggaatgtact actgtaatat aaaaagtcac tgtatttgca ataaattctt ttctattaaa
4980
attgaaaaaa aaaaaaaaaa aaa
5003

<210> 5360

agacggcagc tccctggact cggcccagca ggcatttcac tctgggtaa ttctgctcca
1920
gtgagtatag aaacggagct gatgatggag caggtaaagg agcattacca agacctcagg
1980
accagctgg agaccaaggt aaattactac gaaagggaaa ttgcggcact gaaaaggaac
2040
tttgagaagg agaggaagga catggagcag gctcgcaggc gcgaggtcag cgtgctggag
2100
ggtcagaagg ccgacctgga ggagctccac gagaagtctc aggaggtcat ctggggcctg
2160
caggagcagc tgcaggacac agcccgcggc cccgagcctg agcagatggg cctggcaccc
2220
tgctgcaccc aggcaactgt tggcctggcc ctgcggcatc acagccacct gcagcagatc
2280
aggagagagg ctgaggcgga gctgagtggg gagctgtcgg ggctgggagc cctgcccgt
2340
cgcagagacc tgaccttggg gctggaggag ccgcccagc gacctctgcc acgcccggagc
2400
cagaggtcgg agcagctgga gctggagagg gcaactgaag tgcagccctg tgcgagcgag
2460
aagcgcgccc agatgtgcgt atcgttggcc ctgaggagg aggagtggga gcttgcccgc
2520
gggaagcgag tggacgggccc ctccctggaa gcagagatgc aggccctgcc gaaagatggg
2580
ctggtggcag gaagtggcca ggagggcaca cgtggcctcc taccactgcg tccgggctgt
2640
ggggagcggc cactggcctg gctggcccca ggtgatggca gagagtctga ggaggcgga
2700
ggagccgggc ctgcgccag gcaagcccag gacacagaag ctacgcagag cccggccccc
2760
gcccctgccc cggcatccca cggcccctca gagaggtggg cagcatgca gccctgtgga
2820
gtggatgggg atattgtccc aaaggagcca gagcctttcg gcgcgagcg agcggggctg
2880
gagcagcctg gagcccggga gctgcctctg ctgggaacag agagagacgc ctcgcaaacc
2940
cagccacgga tgtgggagcc acccctgagg ccggccgctt cgtgcagggg acaggctgag
3000
aggctacagg ccattcagga agagcgagca cgaagctgga gcaggggcac ccaggagcag
3060
gcctcgagc agcaggcccc ggccgagggc gccctggagc ctgggtgtca caagcacagt
3120
gtggaggttg ccaggagagg gtccttgcca tcccacctcc agctcgaga cccgcagggt
3180
tcttggcagg agcagcttgc tgccccagaa gagggggaga ccaaaatagc gctggagaga
3240
gagaaggatg acatggaaac caaacttcta catctggaag acgtcgctcg ggctctggag
3300
aaacatgtag atttgagaga gaacgacaga ctggagttcc atagactttc tgaagaaaac
3360
actttgttga aaaacgatct ggggaagggt cggaagagc ttgaagctgc agaaagtact
3420
cacgatgcac agaggaagga aattgaggtt ttaaagaaag acaaggaaaa ggcctgctct
3480

ggaaacgacc atttcgccag ggttaacttt gaggaattta aggaaggttt tgtggctgtg
300
ttgtcttcaa atgctggtgt tcgcccctca gatgaagaca gtagttcttt ggaatcagct
360
gcctccagtg ccacccctcc aaagtatgtg aatggttcta agtggatgg ccgtcggagc
420
cggcctgagc tatgtgacgc tgccacagaa gccagacgcg tgccggagca gcaaaccag
480
gccagcctga aaagtacact ctggcgctca gcgtctctgg agagcgtgga gagtcccaag
540
tcagatgaag aggccgagag cactaaagaa gctcagaatg aattatttga agcacaagga
600
cagctgcaga cctgggattc tgaggacttt gggagcccc agaagtcctg cagcccctcc
660
tttgacaccc cagagagcca gatccggggc gtgtgggaag agctgggggt gggcagcagc
720
ggacacctga gcgagcagga gctggctgtg gtctgccaga gcgtcgggct ccagggactc
780
gagaaagagg aactcgaaga cctgtttaac aaactggatc aagacggaga cggcaaagt
840
agtcttgagg aattccagct tggcctcttc agtcatgagc ccgcgctact tctagagtct
900
tccactcggg ttaaaccgag caaggcttgg tctcattacc aggtcccaga ggagagcggc
960
tgccacacca ccacaacctc atccctcgtg tccctgtgct ccagcctgcg cctcttctcc
1020
agcattgacg atggttcttg ctctcgctttt cctgatcagg tcttgccat gtggaccag
1080
gaggggattc agaatggcag ggagatcttg cagagcctgg acttcagcgt ggacgagaag
1140
gtgaaccttc tggagctgac ctgggccctt gacaacgagc tcatgacagt ggacagtgcc
1200
gtccagcagg cagccctggc ctgctaccac caggagctga gctaccagca agggcaggtg
1260
gagcagctgg caagggagcg tgacaaggca aggcaggacc tggagagggc cgagaagagg
1320
aacctggagt ttgtgaaaga gatggacgac tgccactcca ccctggagca gctcacggag
1380
aagaaaatca agcatctgga gcaggggtac cgggaaaggc tgagcctcct gcggtctgag
1440
gtggaggcgg agcgagagct gttctgggag caggcccaca ggcagagggc cgcgctggag
1500
tgggacgtgg ggcgcctgca ggctgaggag gctggcctcc gcgagaagct gaccctggcc
1560
ctgaaggaaa acagtgcct acagaaggag attgtggaag tggaggaaaa gctttcggat
1620
tcggagaggc tggccctgaa gctgcagaag gacctggagt ttgtgctgaa ggacaagctg
1680
gagccacaga gtgcagagct cctggcccag gaggagcggc tcgcagcagt cctgaaggaa
1740
tacgagctca agtgccggga cctgcaggac cgcaacgatg agctgcaagc tgagctggaa
1800
ggcctgtggg cgcggctgcc caagaaccgg cacagcccct catggagccc ggatgggcgc
1860

```

      20      25      30
Leu Val Thr Leu Leu Gly Leu Ala Val Gly Ser Tyr Leu Val Arg Arg
      35      40      45
Ser Arg Arg Pro Gln Val Thr Leu Leu Asp Pro Asn Glu Lys Tyr Leu
      50      55      60
Leu Arg Leu Leu Asp Lys Thr Thr Val Ser His Asn Thr Lys Arg Phe
      65      70      75      80
Arg Phe Ala Leu Pro Thr Ala His His Thr Leu Gly Leu Pro Val Gly
      85      90      95
Lys His Ile Tyr Leu Ser Thr Arg Ile Asp Gly Ser Leu Val Ile Arg
      100      105      110
Pro Tyr Thr Pro Val Thr Ser Asp Glu Asp Gln Gly Tyr Val Asp Leu
      115      120      125
Val Ile Lys Val Tyr Leu Lys Gly Val His Pro Lys Phe Pro Glu Gly
      130      135      140
Gly Lys Met Ser Gln Tyr Leu Asp Ser Leu Lys Val Gly Asp Val Val
      145      150      155      160
Glu Phe Arg Gly Pro Ser Gly Leu Leu Thr Tyr Thr Gly Lys Gly His
      165      170      175
Phe Asn Ile Gln Pro Asn Lys Lys Ser Pro Pro Glu Pro Arg Val Ala
      180      185      190
Lys Lys Leu Gly Met Ile Ala Gly Gly Thr Gly Ile Thr Pro Met Leu
      195      200      205
Gln Leu Ile Arg Ala Ile Leu Lys Val Pro Glu Asp Pro Thr Gln Cys
      210      215      220
Phe Leu Leu Phe Ala Asn Gln Thr Glu Lys Asp Ile Ile Leu Arg Glu
      225      230      235      240
Asp Leu Glu Glu Leu Gln Ala Arg Tyr Pro Asn Arg Phe Lys Leu Trp
      245      250      255
Phe Thr Leu Asp His Pro Pro Lys Asp Trp Ala Tyr Ser Lys Gly Phe
      260      265      270
Val Thr Ala Asp Met Ile Arg Glu His Leu Pro Ala Pro Gly Asp Asp
      275      280      285
Val Leu Val Leu Leu Cys Gly Pro Pro Pro Met Val Gln Leu Ala Cys
      290      295      300
His Pro Asn Leu Asp Lys Leu Gly Tyr Ser Gln Lys Met Arg Phe Thr
      305      310      315      320
Tyr

```

<210> 5359

<211> 5003

<212> DNA

<213> Homo sapiens

<400> 5359

```

nccggccggcg gtacgggggt ggtgccgcgc tcttgccccc gcgcgggagg acggcggagg
60
cgctctccag cctgctatgg gatggatgaa gaagagaacc actatgtctc gcagctcagg
120
gaagtctaca gcagctgcga caccacgggg actggctttc tggaccgcca ggagctgacc
180
cagctctgcc ttaagcttca cctggagcag cagctgcccg tctctctgca gacgtttctc
240

```


tttcctgagg gaggaagat gtctcagtac ctggatagcc tgaagggttg ggatgtggtg
 480
 gaggtttcggg ggccaagcgg gttgctcact tacactggaa aagggcattt taacattcag
 540
 cccaacaaga aatctccacc agaaccgccga gtggcgaaga aactgggaat gattgccggc
 600
 gggacaggaa tcacccaat gctacagctg atccgggccca tcctgaaagt ccctgaagat
 660
 ccaaccagtg gctttctgct ttttgccaac cagacagaaa aggatatcat cttgcgggag
 720
 gacttagagg aactgcaggc ccgctatccc aatcgcttta agctctgggt cactctggat
 780
 catcccccaa aagattgggc ctacagcaag ggctttgtga ctgccgacat gatccgggaa
 840
 cacctgcccc ctccagggga tgatgtgctg gtactgcttt gtgggccacc cccaatgggtg
 900
 cagctggcct gccatcccaa cttggacaaa ctgggctact cacaaaagat gcgattcacc
 960
 tactgagcat cctccagctt ccctgggtgct gttegtgca gttgttcccc atcagtactc
 1020
 aagcactata agccttagat tcctttcctc agagtttcag gttttttcag ttacatctag
 1080
 agctgaaatc tggatagtag ctgcaggaac aatattcctg tagccatgga agagggccaa
 1140
 ggctcagtc ctccttgat ggctcctaa atctccccgt ggcaacaggt ccaggagagg
 1200
 cccatggagc agtctcttcc atggagtaag aaggaaggga gcatgtacgc ttggtccaag
 1260
 attggctagt tccttgatag catcttactc tcaccttctt tgtgtctgtg atgaaaggaa
 1320
 cagtctgtgc aatgggtttt acttaaaact cactgttcaa cctatgagca aatctgtatg
 1380
 tgtgagtata agttgagcat agcatacttc cagaggtggg cttatggaga tggcaagaaa
 1440
 ggaggaaatg atttcttcag atctcaaagg agtctgaaat atcatatttc tgtgtgtgtc
 1500
 tctctcagcc cctgccagg ctagaggga acagctactg ataatcgaaa actgctgttt
 1560
 gtggcaggaa cccctggctg tgcaaataaa tggggctgag gccctgtgt gatattgaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1680
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1722

<210> 5358

<211> 321

<212> PRT

<213> Homo sapiens

<400> 5358

Ser Gly Ile Cys Arg Leu Val Arg Trp Trp Arg Lys Arg Arg Ser Val

1

5

10

15

Met Gly Ile Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly

<400> 5356

Arg Lys Cys Ile Glu Asp Val Ile His Phe Ala Trp Glu Glu Lys Leu
 1 5 10 15
 Phe Leu Leu Ala Asp Glu Val Tyr Gln Asp Asn Val Tyr Ser Pro Asp
 20 25 30
 Cys Arg Phe His Ser Phe Lys Lys Val Leu Tyr Glu Met Gly Pro Glu
 35 40 45
 Tyr Ser Ser Asn Val Glu Leu Ala Ser Phe His Ser Thr Ser Lys Gly
 50 55 60
 Tyr Met Gly Glu Cys Gly Tyr Arg Gly Gly Tyr Met Glu Val Val Asn
 65 70 75 80
 Leu His Pro Glu Ile Lys Gly Gln Leu Val Lys Leu Leu Ser Val Arg
 85 90 95
 Leu Cys Pro Pro Val Ser Gly Gln Ala Ala Met Asp Ile Val Val Asn
 100 105 110
 Pro Pro Val Ala Gly Glu Glu Ser Phe Glu Gln Phe Ser Arg Glu Lys
 115 120 125
 Glu Ser Val Leu Gly Asn Leu Ala Lys Lys Ala Lys Leu Thr Glu Asp
 130 135 140
 Leu Phe Asn Gln Val Pro Gly Ile His Cys Asn Pro Leu Gln Gly Ala
 145 150 155 160
 Met Tyr Ala Phe Pro Arg Ile Phe Ile Pro Ala Lys Ala Val Glu Ala
 165 170 175
 Ala Gln Ala His Gln Met Ala Pro Asp Met Phe Tyr Cys Met Lys Leu
 180 185 190
 Leu Glu Glu Thr Gly Ile Cys Val Val Pro Gly Ser Gly Phe Gly Gln
 195 200 205
 Arg Glu Gly Thr Tyr His Phe Arg Met Thr Ile Leu Pro Pro Val Glu
 210 215 220
 Lys Leu Lys Thr Val Leu Gln Lys Val Lys Asp Phe His Ile Asn Phe
 225 230 235 240
 Leu Glu Lys Tyr Ala
 245

<210> 5357

<211> 1722

<212> DNA

<213> Homo sapiens

<400> 5357

agtgggatct gtcggcttgt caggtggtgg aggaaaaggc gctccgtcat ggggatccag
 60
 acgagccccg tctgtctggc ctccctgggg gtggggctgg tcactctgct cggcctggct
 120
 gtgggtcct acttggttcg gaggtcccgc cggcctcagg tcactctcct ggaccccaat
 180
 gaaaagtacc tgctacgact gctagacaag acgactgtga gccacaacac caagaggttc
 240
 cgctttgccc tgeccaccgc ccaccacact ctggggctgc ctgtgggcaa acatatctac
 300
 ctctccaccc gaattgatgg cagcctgggc atcaggccat acactcctgt caccagtgt
 360
 gaggatcaag gctatgtgga tcttgtcatc aaggctacc tgaagggtgt gcaccccaaa
 420

acctccaagg gctacatggg cgaatgcggc tacagaggag gctacatgga ggtgggtcaat
240
ttgacccccg agatcaaggg ccagctgggtg aagctgctgt cgggtgcgcct gtgccccca
300
gtgtctgggc aggcccgcat ggacattgtt gtgaaccccc cgggtggcagg agaggagtcc
360
tttgagcaat tcagccgaga gaaggagtgc gtccctgggtg atctggccaa aaaagcaaag
420
ctgacggaag acctgtttaa ccaagtccca ggaattcact gcaaccctt gcagggggcc
480
atgtacgcct tccctcgcat cttcattcct gccaaagctg tggaggctgc tcaggcccat
540
caaagtggctc cagacatgtt ctactgcatg aagctcctgg aggagactgg catctgtgtc
600
gtgccccgca gtggcttttg gcagagggaa ggcacttacc acttcaggat gactatcctc
660
cctccagtgg agaagctgaa aacggtgctg cagaaggtga aagacttcca catcaacttc
720
ctggagaagt acgcgtgagg acgcctgagc cccagcggga gacctgtcct tggctcttcc
780
tcccaatgcc cgtcaggtg aactcgcctc ccccgtagt ctgcctcggg cctcgcagag
840
gccgctggtc acttcgtcat cattttgccc ctggagacgt ctttctttgt gccttgatgt
900
tgagagcgcc tctcttttga gcaacaagc attctatatg caaccagagt agaggggacc
960
tgctcagcag gtgtgaccag ggttctctga atctgttatt gtttttgctt ctggaaagtt
1020
catttggggt ttacaacaac taggatgtgt tgggtgagat gtttcagatc tggagaaatg
1080
agcaggtgtc gggaaatgtg tgacttaacc gtggtgaggg ctggaaatcc aaactcacca
1140
ccatgatctg tgaaataaag cccttagcgg tgtgaagcat ccggtccttt gaacagaagg
1200
gcctggaagg cccctggggc tgagaaaggg tccgcccggg ggcctggagg caggcgccgg
1260
gagcgcagta gcacgtggac tgggcaggat gttgcactag cttggggtag atgctggggg
1320
ctgcggccac ggtcagaggg cccactgtg aggcgtgggt gtgagccagg ctgcaggagg
1380
aactgggcct ccgcttccca gcaacgcagc caggcctgag aattctgtgc gcccgggggg
1440
ctttgggaat gaggggttcc cttgaacatg cgtaggctgg aaccccgctc gagaggctc
1500
cctgaatttc agtgacacat agtgacagcc ggcagtgtcc cacttccgtg gagagagccg
1560
ctggaatggt gtggacccat cccgcgggtg accggt
1596

<210> 5356

<211> 245

<212> PRT

<213> Homo sapiens

275 280 285
 Ile Pro Thr Tyr Pro Asp Val Asn Arg Leu Trp Ser Ile Val Asp Lys
 290 295 300
 Tyr Lys Val Thr Lys Phe Tyr Thr Ala Pro Thr Ala Ile Arg Leu Leu
 305 310 315 320
 Met Lys Phe Gly Asp Glu Pro Val Thr Lys His Ser Arg Ala Ser Leu
 325 330 335
 Gln Val Leu Gly Thr Val Gly Glu Pro Ile Asn Pro Glu Ala Trp Leu
 340 345 350
 Trp Tyr His Arg Val Val Gly Ala Gln Arg Cys Pro Ile Val Asp Thr
 355 360 365
 Phe Trp Gln Thr Glu Thr Gly Gly His Met Leu Thr Pro Leu Pro Val
 370 375 380
 Pro Thr Pro Met Lys Pro Gly Ser Ala Thr Phe Pro Phe Phe Gly Val
 385 390 395 400
 Ala Pro Ala Ile Leu Asn Glu Ser Gly Glu Glu Leu Glu Gly Glu Ala
 405 410 415
 Glu Gly Tyr Leu Val Phe Lys Gln Pro Trp Pro Gly Ile Met Arg Thr
 420 425 430
 Val Tyr Gly Asn His Glu Arg Phe Glu Thr Thr Tyr Ser Lys Lys Phe
 435 440 445
 Pro Gly Tyr Tyr Val Thr Gly Asp Gly Cys Gln Arg Asp Gln Asp Gly
 450 455 460
 Tyr Tyr Trp Ile Thr Gly Arg Ile Asp Asp Met Leu Asn Val Ser Gly
 465 470 475 480
 His Leu Leu Ser Thr Ala Glu Val Glu Ser Ala Leu Val Glu His Glu
 485 490 495
 Ala Val Ala Glu Ala Ala Val Val Gly His Pro His Pro Val Lys Gly
 500 505 510
 Glu Cys Leu Tyr Cys Phe Val Thr Leu Cys Asp Gly His Thr Phe Ser
 515 520 525
 Pro Lys Leu Thr Glu Glu Leu Lys Lys Gln Ile Arg Glu Lys Ile Gly
 530 535 540
 Pro Ile Ala Thr Pro Asp Tyr Ile Gln Asn Ala Pro Gly Leu Pro Lys
 545 550 555 560
 Thr Arg Ser Gly Lys Ile Met Arg Arg Val Leu Arg Lys Ile Ala Gln
 565 570 575
 Asn Asp His Asp Leu Gly Asp Met Ser Thr Val Ala Asp Pro Ser Val
 580 585 590
 Ile Ser His Leu Phe Ser His Arg Cys Leu Thr Ile Gln
 595 600 605

<210> 5355

<211> 1596

<212> DNA

<213> Homo sapiens

<400> 5355

agaaagtgc tagaagatgt gatccacttt gcttggaag agaagctctt tctcctggct

60

gatgaggtgt accaggacaa cgtgtactct ccagattgca gattccactc cttcaagaag

120

gtgctgtacg agatggggcc cgagtactcg agtaatgtgg agcttgctc cttccactcc

180

ttctgttctg ggtctgaatt cccttttgtg ccagatgccg gtactgtctg cccattggct
 3960
 ccaggggctg tatgggcaga ttcagtctcc agagggtatt cagatcatct gcttctttga
 4020
 aggagtaaatt gtgttttgtt cctagggcca gaggagcttg tcttcttgtt cctctgttcc
 4080
 caccctcccc tgaacagaac ccagcccata agagacattc tcagatgaaa ctctgttttc
 4140
 ttgccccagt caggctcaag ccctgtggtt gtaggaataa agcctgtgat ctcaaaaaaa
 4200
 aaaaaaaaaa aaaaaaa
 4217

<210> 5354

<211> 605

<212> PRT

<213> Homo sapiens

<400> 5354

Met	Lys	Gly	Ala	Thr	Thr	Asn	Ile	Cys	Tyr	Asn	Val	Leu	Asp	Arg	Asn	1	5	10	15
Val	His	Glu	Lys	Lys	Leu	Gly	Asp	Lys	Val	Ala	Phe	Tyr	Trp	Glu	Gly	20	25	30	
Asn	Glu	Pro	Gly	Glu	Thr	Thr	Gln	Ile	Thr	Tyr	His	Gln	Leu	Leu	Val	35	40	45	
Gln	Val	Cys	Gln	Phe	Ser	Asn	Val	Leu	Arg	Lys	Gln	Gly	Ile	Gln	Lys	50	55	60	
Gly	Asp	Arg	Val	Ala	Ile	Tyr	Met	Pro	Met	Ile	Pro	Glu	Leu	Val	Val	65	70	75	80
Ala	Met	Leu	Ala	Cys	Ala	Arg	Ile	Gly	Ala	Leu	His	Ser	Ile	Val	Phe	85	90	95	
Ala	Gly	Phe	Ser	Ser	Glu	Ser	Leu	Cys	Glu	Arg	Ile	Leu	Asp	Ser	Ser	100	105	110	
Cys	Ser	Leu	Leu	Ile	Thr	Thr	Asp	Ala	Phe	Tyr	Arg	Gly	Glu	Lys	Leu	115	120	125	
Val	Asn	Leu	Lys	Glu	Leu	Ala	Asp	Glu	Ala	Leu	Gln	Lys	Cys	Gln	Glu	130	135	140	
Lys	Gly	Phe	Pro	Val	Arg	Cys	Cys	Ile	Val	Val	Lys	His	Leu	Gly	Arg	145	150	155	160
Ala	Glu	Leu	Gly	Met	Gly	Thr	Pro	Pro	Ala	Ser	Pro	Pro	Gln	Leu	Arg	165	170	175	
Gly	His	Ala	Asp	Val	Gln	Ile	Ser	Trp	Asn	Gln	Gly	Ile	Asp	Leu	Trp	180	185	190	
Trp	His	Glu	Leu	Met	Gln	Glu	Ala	Gly	Asp	Glu	Cys	Glu	Pro	Glu	Trp	195	200	205	
Cys	Asp	Ala	Glu	Asp	Pro	Leu	Phe	Ile	Leu	Tyr	Thr	Ser	Gly	Ser	Thr	210	215	220	
Gly	Lys	Pro	Lys	Gly	Val	Val	His	Thr	Val	Gly	Gly	Tyr	Met	Leu	Tyr	225	230	235	240
Val	Ala	Thr	Thr	Phe	Lys	Tyr	Val	Phe	Asp	Phe	His	Ala	Glu	Asp	Val	245	250	255	
Phe	Trp	Cys	Thr	Ala	Asp	Ile	Gly	Trp	Ile	Thr	Gly	His	Ser	Tyr	Val	260	265	270	
Thr	Tyr	Gly	Pro	Leu	Ala	Asn	Gly	Ala	Thr	Ser	Val	Leu	Phe	Glu	Gly				

atcctgtaca ccagtggctc cacaggcaaa cccaaggggtg tggttcacac agttgggggc
2340
tacatgctct atgtagccac aacettcaag tatgtgtttg acttccatgc agaggatgtg
2400
ttctggtgca cggcagacat tggttggatc actggtcatt cctacgtcac ctatgggcca
2460
ctggccaatg gtgccaccag tggtttgttt gaggggattc ccacatatcc ggacgtgaac
2520
cgccgttgga gcattgtgga caaatacaag gtgaccaagt tctacacagc acccacagcc
2580
atccgtctgc tcatgaagtt tggagatgag cctgtcacca agcatagccg ggcaccttg
2640
caggtgttag gcacagtggg tgaacccatc aaccctgagg cctggctatg gtaccaccg
2700
gtggtagggtg ccagcgcgtg ccccatcgtg gacaccttct ggcaaacaga gacaggtggc
2760
cacatgttga ctccccctcc tggtcccaca cccatgaaac ccggttctgc tactttcca
2820
ttctttgggtg tagctcctgc aatcctgaat gagtccgggg aagagttgga aggtgaagct
2880
gaaggttatc tgggtgtcaa gcagccctgg ccagggatca tgcgcacagt ctatgggaac
2940
cacgaacgct ttgagacaac ctactctaag aagtttctctg gatactatgt tacaggagat
3000
ggctgccagc gggaccagga tggctattac tggatcactg gcaggattga tgacatgctc
3060
aatgtatctg gacacctgct gagtacagca gaggtggagt cagcacttgt ggaacatgag
3120
gctgttgca ggcagctgt ggtggggccac cctcatcctg tgaaggggtga atgcctctac
3180
tgctttgtca ccttgtgtga tggccacacc ttcagcccca agctcacga ggagctcaag
3240
aagcagatta gagaaaagat tggccccatt gccacaccag actacatcca gaatgcacct
3300
ggcttgccca aaacccgctc agggaaaatc atgaggcgag tgcttcggaa gattgctcag
3360
aatgaccatg acctcgggga catgtctact gtggctgacc catctgtcat cagtcaacct
3420
ttcagccacc gctgcctgac catccagtga acatgatcct gacctttacc taggattcct
3480
cctgtccaa actttgcca tctctttgc cccctcagga gtgctgaggg ccagtgttga
3540
cccacactac cctcccttga ccagctgtct gggaccggaa accagctttg tctccaggta
3600
gagacaacat cctgtgactg ccaggcagaa aggacagggc ccaggtcagc ctcagtctgc
3660
tgtgctcca gactgcagag ctctcagaac ccagaacaga gacgaaaagg ctacctctcc
3720
taccgaagtt aagtgttcaa aggggatgtg agggcctcca ctgaagcagg gaggcagctg
3780
tgtaatccta tgctagctct cttaggaagc ccagttactt atattgggca tgcacttgcc
3840
cttaaaaaaca atgattttgtg agtccaggaa caatttacta tttttaaatt attttgctgc
3900

atgatagcta cagcattaat tgaacatgcc taaacaaaaa agatgttaat tactagttac
720
aggatatacat gccaaaatta cccccaggga tgggcatagt caatcatttt cctacagtgg
780
tgaaataaaa caagctttga tcatgttca gcaagtagaa ttatgtggta gagaagtcag
840
gccccatatg ctaaaatttg cacttcttgc cataaacttt tcatgtatat aagtcaaaac
900
ccagtctcct aggaccacta aacctatgat gggctttcaa ctgtaacact cattcacatc
960
tttaagttag gcccatgggc atggaacctg gccaaaggtt caagcacgcc taagctgaag
1020
aaaaactaaa gtcaccccca tataattagg tccagtctag gcacaggaag ccacagctgg
1080
ttgactgac agggcttctc aggactggat gttggttgaa ttgaggattc cagaagtagc
1140
atcagatttg gaagcctttg aaagtctctg ctgttgaaaa ataaataaca tcagtggcca
1200
tactgcctct cttacacatg gccaccctt ctaagtgttg ttaagtgtca gcaaaaggtc
1260
ccttgaagg agtttctctg agatccctag cctgcaatag gctgcgttag gagtaaaagg
1320
tgaggaaactc tgagcaccat tctattagtc acagacagag tgcatgtgca cgcagtcgcc
1380
tgaccccgcc ggggccagga ggaagctgga gccggaggcc gggcgaggag ttggtctccg
1440
ccgcccagg tcagccgctc cgcgcacgct ccctcgtctg agcgtctacc cgagctgcac
1500
cgcgctccg tggaggagcc gcgggaatc tggggagaca ttgccaagga attttactgg
1560
aagactccat gccctggccc attccttcgg tacaactttg atgtgactaa agggaaaatc
1620
ttcattgagt ggatgaaagg agcaactacc aacatctgct acaatgtact ggatcgaaat
1680
gtccatgaga aaaagcttg agataaagtt gctttttact gggagggcaa tgagccaggg
1740
gagaccactc agatcacata ccatcagctt ctggtccaag tgtgtcagtt cagcaatgtt
1800
ctccgaaaac agggcattca gaagggggac cgagtggcca tctacatgcc tatgatccca
1860
gagcttggtg tggccatgct ggcattgtgc cgcattgggg ctttgcactc cattgtgttt
1920
gcaggcttct cttcagagtc tctatgtgaa cggatcttgg attccagctg cagtcttctc
1980
atcactacag atgccttcta caggggggaa aagcttgtga acctgaagga gctggctgac
2040
gaggccctgc agaagtgtca ggagaagggt ttcccagtaa gatgctgcat tgtggtcaag
2100
cacctggggc gggcagagct cggcatgggt actccaccag ccagtcccc ccaattaaga
2160
ggtcatgcc atgtgcagat ctcattggaac caagggttg acttgtggtg gcatgagctc
2220
atgcaagagg caggggatga gtgtgagccc gagtgggtg atgccgagga cccactcttc
2280

cctcctctca ctattggaca gcttgaagcc aaggcccagg cctgaccagt aggaatccga
 300
 caggatgttg gcgtagacag cggtcatttt atccatgcaa ttg
 343

<210> 5352
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 5352
 Met Asp Lys Met Thr Ala Val Tyr Ala Asn Ile Leu Ser Asp Ser Tyr
 1 5 10 15
 Trp Ser Gly Leu Gly Leu Gly Phe Lys Leu Ser Asn Ser Glu Arg Arg
 20 25 30
 Asn Cys Asp Thr Arg Asn Gly Ser Asn Lys Ser Asp Phe Asp Trp His
 35 40 45
 Gln Asp Ala Leu Ser Lys Ser Leu Gln Gln Asn Leu Pro Ser Arg Ser
 50 55 60
 Val Ser Lys Pro Ser Leu Phe Ser Ser Val Gln Leu Tyr Arg Gln Ser
 65 70 75 80
 Ser Lys Met Cys Gly Thr Val Phe Thr Gly Ala Ser Arg Phe Arg Cys
 85 90 95
 Arg Gln Cys Ser Ala Ala Tyr Asp Thr Leu Val Glu Leu Thr Val His
 100 105 110

<210> 5353
 <211> 4217<212> DNA
 <213> Homo sapiens

<400> 5353
 tttttttttt ttgaaatgta agtatacaga ttttaattta tttttaagaa taattgtata
 60
 ttttaaaaac aggacacgta ctgtatgagt aaacagcgtg gctaacacca agtccacact
 120
 ggtaagcttt tgagaacat ttacactatg ttgacagtag tactgctgca ggcagacagc
 180
 ggaagaataa ataatagtgc ttcaagaaga gtagtgattg agaggatagg taaagagggc
 240
 gcctcatcgt ggaagctaga gcaggaacac ctcccagta gtgacatgtg caaagttcca
 300
 aatctccacg acaaagacag ctcaaccac tggaacaaac agactcccaa tgtggctggc
 360
 aactgcgggg gtagaagaac tcaggcaaag taggcacagg aatgggggag atgagagcca
 420
 agggacaaaac gccgagaaag cgttccgaca agcatgtgtg ttcatacatg cataccccca
 480
 acaaagggca atgcactgtg taacagaact gaacacaatt taacaaagct gctcccagcc
 540
 ttctgtcac ctctttggca gtagggcagg ccatctcaac ttcggacaca caaagacatt
 600
 ctcttcagga ggaaggctgt cctgtgtggt ggggacaagg cttcaggtaa gagcaaagct
 660

acagttctca ggtcactgca tgtcactcct caccactgcc ctgtggttgc caggacaact
 120
 tgggcaaaca ccacaccagc agggagcccc aagcccagcc caagccccac aaagtctcca
 180
 gccaggaagg ggaaggcagg ataccactgc ctgggaaggc ggaagtgaga gaggcaggcc
 240
 aacccattcc tgttctctt ctacttctt ctccaaagaa agccctcact ctctcgcta
 300
 cagcccaggg aggtcacgag gggctgggaa gactcctgtg gcaaagtggc cactccagc
 360
 ccaggcctga gaaaaaagg accccgaaat cttctggct accagtatct tctgccttca
 420
 cgcgt
 425

<210> 5350
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 5350
 Met Gly Gly Leu Gly Leu His Phe Phe Val Pro Thr His Ser Ser Gln
 1 5 10 15
 Val Thr Ala Cys His Ser Ser Pro Leu Pro Cys Gly Cys Gln Asp Asn
 20 25 30
 Leu Gly Lys His His Thr Ser Arg Glu Pro Gln Ala Gln Pro Lys Pro
 35 40 45
 His Lys Val Ser Ser Gln Glu Gly Glu Gly Arg Ile Pro Leu Pro Gly
 50 55 60
 Lys Ala Glu Val Arg Glu Ala Gly Gln Pro Ile Pro Val Ser Leu Leu
 65 70 75 80
 Leu Leu Ser Pro Lys Lys Ala Leu Thr Leu Leu Ala Thr Ala Gln Gly
 85 90 95
 Gly His Glu Gly Leu Gly Arg Leu Leu Trp Gln Ser Gly Pro Leu Gln
 100 105 110
 Pro Arg Pro Glu Lys Lys Arg Thr Pro Lys Ser Phe Trp Leu Pro Val
 115 120 125
 Ser Ser Ala Phe Thr Arg
 130

<210> 5351
 <211> 343
 <212> DNA
 <213> Homo sapiens

<400> 5351
 gtgcacagtc agctcgacta ggggtgcata ggccgcgctg cactgtcggc atcggaatct
 60
 gctggcccct gtgaacacag tcccgacat cttgtgtctc tgctgggtaca actgcaccga
 120
 gctgaacagg ctgggtttcg agacggaccg agaaggcaag ttctgtgtgca ggcttttggg
 180
 cagagcgtct tgggtccaat caaaatcact cttgtgtgtg ccgtttcggg tgtcacagtt
 240

```

      340      345      350
Glu Gln Thr Leu Pro Gly Thr Asn Leu Thr Gly Phe Leu Ser Pro Val
      355      360      365
Asp Asn His Met Arg Asn Leu Thr Ser Gln Asp Leu Leu Tyr Asp Leu
      370      375      380
Asp Ile Asn Ile Phe Asp Glu Ile Asn Leu Met Ser Leu Ala Thr Glu
      385      390      395      400
Asp Asn Phe Asp Pro Ile Asp Val Ser Gln Leu Phe Asp Glu Ser Asp
      405      410      415
Ser Asp Ser Gly Leu Ser Leu Asp Ser Ser His Asn Asn Thr Ser Val
      420      425      430
Ile Lys Ser Asn Ser Ser His Ser Val Cys Asp Glu Gly Ala Ile Gly
      435      440      445
Tyr Cys Thr Asp His Glu Ser Ser Ser His His Asp Leu Glu Gly Ala
      450      455      460
Val Gly Gly Tyr Tyr Pro Glu Pro Ser Lys Leu Cys His Leu Asp Gln
      465      470      475      480
Ser Asp Ser Asp Phe His Gly Asp Leu Thr Phe Gln His Val Phe His
      485      490      495
Asn His Thr Tyr His Leu Gln Pro Thr Ala Pro Glu Ser Thr Ser Glu
      500      505      510
Pro Phe Pro Trp Pro Gly Lys Ser Gln Lys Ile Arg Ser Arg Tyr Leu
      515      520      525
Glu Asp Thr Asp Arg Asn Leu Ser Arg Asp Glu Gln Arg Ala Lys Ala
      530      535      540
Leu His Ile Pro Phe Ser Val Asp Glu Ile Val Gly Met Pro Val Asp
      545      550      555      560
Ser Phe Asn Ser Met Leu Ser Arg Tyr Tyr Leu Thr Asp Leu Gln Val
      565      570      575Leu Ile Arg
Asp Ile Arg Arg Arg Gly Lys Asn Lys Val Ala Ala
      580      585      590
Gln Asn Cys Arg Lys Arg Lys Leu Asp Ile Ile Leu Asn Leu Glu Asp
      595      600      605
Asp Val Cys Asn Leu Gln Ala Lys Lys Glu Thr Leu Lys Arg Glu Gln
      610      615      620
Ala Gln Cys Asn Lys Ala Ile Asn Ile Met Lys Gln Lys Leu His Asp
      625      630      635      640
Leu Tyr His Asp Ile Phe Ser Arg Leu Arg Asp Asp Gln Gly Arg Pro
      645      650      655
Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile
      660      665      670
Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr
      675      680      685
Gln Lys Gly Lys Arg Lys
      690

```

<210> 5349

<211> 425

<212> DNA

<213> Homo sapiens

<400> 5349

gtgcacgaag ttccaatggg cttatgggag ggctaggtct ccacttcttt gtacctacac
60

acactattttt aatctttata tttaacttat aaattttgct ttctatggaa ataaattttg
 2880
 tatttgattt aaa
 2893

<210> 5348

<211> 694

<212> PRT

<213> Homo sapiens

<400> 5348

Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His
 1 5 10 15
 Leu Thr Leu Leu Leu Ser Leu Ala Gly Leu Arg Val Asp Leu Asp Leu
 20 25 30
 Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe
 35 40 45
 Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala
 50 55 60
 Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu
 65 70 75 80
 Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg
 85 90 95
 Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu
 100 105 110
 Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu
 115 120 125
 Gly Ala Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp
 130 135 140
 Gly Gly Ser Gln Ala Val Gln Gly Gly Cys Gly Asp Ser Arg Ala Ala
 145 150 155 160
 Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu
 165 170 175
 Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn
 180 185 190
 Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His
 195 200 205
 Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln
 210 215 220
 Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu
 225 230 235 240
 Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr
 245 250 255
 Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln
 260 265 270
 Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro
 275 280 285
 Gly Ser Ile Ser Asp Gly Met Asn Ser Ser Ala His Tyr His Val Asn
 290 295 300
 Phe Ser Gln Ala Ile Ser Gln Asp Val Asn Leu His Glu Ala Ile Leu
 305 310 315 320
 Leu Cys Pro Asn Asn Thr Phe Arg Arg Asp Pro Thr Ala Arg Thr Ser
 325 330 335
 Gln Ser Gln Glu Pro Phe Leu Gln Leu Asn Ser His Thr Thr Asn Pro

tatcatgtaa acttcagcca ggctataagt caggatgtga atcttcatga ggccatcttg
1260
ctttgtccca acaatacatt tagaagagat ccaacagcaa ggacttcaca gtcacaagaa
1320
ccatttctgc agttaaattc tcataccacc aatcctgagc aaacccttcc tggaactaat
1380
ttgacaggat ttctttcacc ggttgacaat catatgagga atctaacaag ccaagaccta
1440
ctgtatgacc ttgacataaa tatatttgat gagataaact taatgtcatt ggccacagaa
1500
gacaactttg atccaatcga tgtttctcag ctttttgatg aatcagattc tgattctggc
1560
ctttcttttag attcaagtca caataatacc tctgtcatca agtctaattc ctctcactct
1620
gtgtgtgatg aagggtgctat aggttattgc actgaccatg aatctagttc ccatcatgac
1680
ttagaagggtg ctgtagggtgg ctactacca gaaccagta agctttgtca cttggatcaa
1740
agtgattctg atttccatgg agatcttaca tttcaacacg tatttcataa ccacacttac
1800
catttacagc caactgcacc agaattact tctgaacctt ttccgtggcc tgggaagtca
1860
cagaagataa ggagtagata ccttgaagac acagatagaa acttgagccg tgatgaacag
1920
cgtgctaaag ctttgcatac ccttttttct gtagatgaaa ttgtcggcat gcctgttgat
1980
tctttcaata gcatgttaag tagatattat ctgacagacc tacaagtctc acttatccgt
2040
gacatcagac gaagagggaa aaataaagtt gctgcgcaga actgtcgtaa acgcaaattg
2100
gacataattt tgaatttaga agatgatgta tgtaacttgc aagcaaagaa ggaaactctt
2160
aagagagagc aagcacaatg taacaaagct attaacataa tgaaacagaa actgcatgac
2220
ctttatcatg atatttttag tagattaaga gatgaccaag gtaggccagt caatcccaac
2280
cactatgctc tccagtgtac ccatgatgga agtatcttga tagtaccxaa agaactgggtg
2340
gcctcaggcc acaaaaagga aacccaaaag ggaaagagaa agtgagaaga aactgaagat
2400
ggactctatt atgtgaagta gtaatgttca gaaactgatt atttgatca gaaaccattg
2460
aaactgcttc aagaattgta tctttaagta ctgctacttg aataactcag ttaacgctgt
2520
tttgaagctt acatggacaa atgttttaga cttcaagatc acacttggtg gcaatctggg
2580
ggagccacaa cttttcatga agtgattgt atacaaaatt catagttagt tccaaagaat
2640
aggttaacat gaaaaccag taagactttc catcttggca gccatcctt ttaagagtaa
2700
gttggttact tcaaaaagag caaacactgg ggatcaaatt attttaagag gtatttcagt
2760
tttaaagca aaatagcctt attttcattt agtttgtag cactatagt agcttttcaa
2820

485 490 495
 Ile Leu Asn Pro Asp Gly Tyr Thr Leu Asn Tyr Asn Glu Tyr Ile Val
 500 505 510
 Tyr Asn Pro Asn Gln Val Arg Met Arg Tyr Leu Leu Lys Val Gln Phe
 515 520 525
 Asn Phe Leu Gln Leu Trp
 530

<210> 5347<211> 2893

<212> DNA

<213> Homo sapiens

<400> 5347

gagcttgcc accgcgccg gctgcggcg gctggcgaa cgggctcggc gctcaggtgg
 60
 ctccctcttc gcttctccc atccccggcg gtgccaggca cggtgccggc tgccgaggga
 120
 acgcctttgt gcccggtgct gggaaccgc gacggccgcc acgcgccccg gtccattgtt
 180
 tcgcttatct gggttccagg caggtgcggg cggcgcgcg ggtccgcacg tgtcaccgcc
 240
 gcggctgggg cgcggggacc cgcggggcgc ggcagggcg ttcccggcg cgcggcgcg
 300
 atgaagcacc tgaagcgggt gtgggtcgcc ggcggcgcc tctgcacct caccctctg
 360
 ctgagcttg cggggctccg cgtagacct gatctttacc tgctgctgcc gccgccacc
 420
 ctgctgcagg acgagctgct gttcctgggc ggcccggcca gtcgcgcta cgcgctcagc
 480
 cccttctcgg cctcgggagg gtggggcgcg gcgggacct tgcacccaa gggccgggag
 540
 ctggaccctg ccgcgccgcc cgagggccag ctgctccggg aggtgcgcgc gctcggggtc
 600
 cccttcgtcc ctgcaccag cgtggatgca tggctggtgc acagcgtggc tgccgggagc
 660
 gcggacgagg ccacgggct gtcggcgcc gccgccgct cgtccaccgg aggagccggc
 720
 gccagcgtgg acggcggcag ccaggctgtg caggggggct gcggggactc ccgagcggct
 780
 cggagtggcc ccttggaacg cggggaagag gagaaggcac ccgcggaacc gacggctcag
 840
 gtgccggacg ctggcggatg tgcgagcgag gagaatggg tactaagaga aaagcacgaa
 900
 gctgtggatc atagtccca gcatgaggaa aatgaagaaa ggtgtgcagc ccagaaggag
 960
 aactcacttc agcagaatga tgatgatgaa aacaaaatag cagagaaacc tgactgggag
 1020
 gcagaaaaga cactgaatc tagaaatgag agacatctga atgggacaga tacttcttct
 1080
 tctctggaag acttattcca gttgctttca tcacagcctg aaaattcact ggagggcac
 1140
 tcattgggag atattcctct tccaggcagt atcagtgatg gcatgaattc ttcagcacat
 1200

4521

tcacagctag atcttcgggt acaggagtta ataaagttga tctgtaatgt tcaggccatg
 780
 gaagaaatga tgatggaaat gaagtataat accaagaaag cccacttgg gaagctgaca
 840
 gtggcacaaa tcaaggcagg ttaccagtct cttaagaaga ttgaggattg tattcgggct
 900
 ggccagcatg gacgagctct catggaagca tgcaatgaat tctacaccag gattccgcat
 960
 gactttggac tccgtactcc tccactaatc cggacacaga aggaactgtc agaaaaata
 1020
 caattactag aggctttggg agacattgaa attgctatta agctggtgaa aacagagcta
 1080
 caaagcccag aacaccatt ggaccaacac tatagaaacc tacattgtgc cttgcgcccc
 1140
 cttgaccatg aaagttacga gttcaaagtg atttcccagt acctacaatc tacccatgct
 1200
 cccacacaca gcgactatac catgaccttg ctggatttgt ttgaagtgga gaaggatggt
 1260
 gagaaagaag ccttcagaga ggaccttcac aacaggatgc ttctatggca tggttccagg
 1320
 atgagtaact ggggtgggaat cttgagccat gggcttcgaa ttgccccacc tgaagctccc
 1380
 atcacagggt acatgtttgg gaaaggaatc tactttgtg acatgtcttc caagagtgcc
 1440
 aattactgct ttgcctctcg cctaaagaat acaggactgc tgctcttacc agaggtagct
 1500
 ctaggctcagt gtaatgaact actagaggcc aatcctaagg ccgaaggatt gcttcaaggt
 1560
 aaacatagca ccaaggggct gggcaagatg gctcccagtt ctgcccactt cgtcacctg
 1620
 aatgggagta cagtgccatt aggaccagca agtgacacag gaattctgaa tccagatggt
 1680
 tataccctca actacaatga atatattgta tataacccca accaggtccg tatgcggtac
 1740
 cttttaaagg ttcagtttaa tttccttcag ctgtggtgaa tgttgatatt aaataaacca
 1800
 gagatctgat cttcaagcaa gaaaataagc agtgtgtgac ttgtgaattt tgtgatattt
 1860
 tatgtaataa aaactgtaca ggtctaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1912

<210> 5346

<211> 534

<212> PRT

<213> Homo sapiens

<400> 5346

Met Pro Val Ala Gly Gly Lys Ala Asn Lys Asp Arg Thr Glu Asp Lys
 1 5 10 15
 Gln Asp Gly Met Pro Gly Arg Ser Trp Ala Ser Lys Arg Val Ser Glu
 20 25 30
 Ser Val Lys Ala Leu Leu Leu Lys Gly Lys Ala Pro Val Asp Pro Glu
 35 40 45
 Cys Thr Ala Lys Val Gly Lys Ala His Val Tyr Cys Glu Gly Asn Asp

<210> 5344
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 5344
 Ser Arg Ser Leu Arg Gln Gly Arg Leu Tyr Arg Gln Pro Lys Phe Leu
 1 5 10 15
 Arg Thr Met Asp Val Phe Asp Met Glu Gln Gly Gly Trp Leu Lys Met
 20 25 30
 Glu Arg Ser Phe Phe Leu Lys Lys Arg Arg Ala Asp Phe Val Ala Gly
 35 40 45
 Ser Leu Ser Gly Arg Val Ile Val Ala Gly Gly Leu Gly Asn Gln Pro
 50 55 60
 Thr Val Leu Glu Thr Ala Glu Ala Phe His Pro Gly Lys Asn Lys Trp
 65 70 75 80
 Glu Ile Leu Pro Ala Met Pro Thr Pro Arg Cys Ala Cys Ser Ser Ile
 85 90 95
 Val Val Lys Asn Cys Leu Leu Ala Val Gly Gly Val Asn Gln Gly Leu
 100 105 110
 Ser Asp Ala Val Glu Ala Leu Cys Val Ser Asp Ser
 115 120

<210> 5345
 <211> 1912
 <212> DNA
 <213> Homo sapiens

<400> 5345
 nnctagaatt cagcggccgc tgaattctag gcggcgcggc ggcgacggag caccggcggc
 60
 ggcagggcga gagcattaaa tgaaagcaaa agagttaata atggcaacac ggctccagaa
 120
 gactcttccc ctgccaagaa aactcgtaga tgccagagac aggagtcgaa aaagatgcct
 180
 gtggctggag gaaaagctaa taaggacagg acagaagaca agcaagatgg tatgccagga
 240
 aggtcatggg ccagcaaaag ggtctctgaa tctgtgaagg ccttgctgtt aaagggcaaa
 300
 gctcctgtgg acccagagtg tacagccaag gtggggaagg ctcattgtgta ttgtgaagga
 360
 aatgatgtct atgatgtcat gctaaatcag accaatctcc agttcaacaa caacaagtac
 420
 tatctgattc agctattaga agatgatgcc cagaggaact tcagtgtttg gatgagatgg
 480
 ggccgagttg ggaaaatggg acagcacagc ctggtggcct gttcaggcaa tctcaacaag
 540
 gccaaagaaa tctttcagaa gaaattcctt gacaaaacga aaaacaattg ggaagatcga
 600
 gaaaagtgtg agaaggtgcc tggaaaatat gatatgctac agatggacta tgccaccaat
 660
 actcaggatg aagaggaaac aaagaaagag gaatctctta aatctccctt gaagccagag
 720

530 535 540
 Leu Tyr Phe Arg Asp Arg Leu Gly Asp Thr Phe Arg Trp Lys Gly Glu
 545 550 555 560
 Asn Val Ser Thr His Glu Val Glu Gly Val Leu Ser Gln Val Asp Phe
 565 570 575
 Leu Gln Gln Val Asn Val Tyr Gly Val Cys Val Pro Gly Cys Glu Gly
 580 585 590
 Lys Val Gly Met Ala Ala Val Gln Leu Ala Pro Gly Gln Thr Phe Asp
 595 600 605
 Gly Glu Lys Leu Tyr Gln His Val Arg Ala Trp Leu Pro Ala Tyr Ala
 610 615 620
 Thr Pro His Phe Ile Arg Ile Gln Asp Ala Met Glu Val Thr Ser Thr
 625 630 635 640
 Phe Lys Leu Met Lys Thr Arg Leu Val Arg Glu Gly Phe Asn Val Gly
 645 650 655
 Ile Val Val Asp Pro Leu Phe Val Leu Asp Asn Arg Ala Gln Ser Phe
 660 665 670
 Arg Pro Leu Thr Ala Glu Met Tyr Gln Ala Val Cys Glu Gly Thr Trp
 675 680 685
 Lys Leu
 690

<210> 5343

<211> 752

<212> DNA

<213> Homo sapiens

<400> 5343

tctagaagcc tgcggcaagg tcgcctctac cggcagccca agttcctgcg gacgatggac
 60
 gtgttcgaca tggaacaggg gggatggctg aagatggaac gatcgttctt cctcaagaag
 120
 cggcgggcag attttgtggc tggctctctg agtggacggg tcatagtggc tgggggactt
 180
 gggaatcaac ccactgtcct ggagacggcg gaagcattcc acccagggaa gaacaaatgg
 240
 gagatcctcc ctgccatgcc cacaccccg cgtgcctgct ccagcatagt cgtcaagaac
 300
 tgcctctctg ctgtgggagg tgtcaaccag ggtctgagtg acgcagtgga ggcctgtgt
 360
 gtctctgact cctagctgtc tctgggctca gtacctttgc cctggaccat atcacttcac
 420
 tcttaacatg aggaatgac ttgtccaagc agtcggggct acttccaaga atgtcagctc
 480
 ctgtagcaa ccagtggagt ctggccttgg ggctctaagt tgacctctct atagctccaa
 540
 atcctaccaa tctcagaaaa ctgtaagagg cacagatgac tccaccagct gcagagctga
 600
 ctctgaagag agtcttcact tactgcacag gcaaagaaag gcacaggaat atttctacc
 660
 tctcctcct gtgagtccca cctcccccca ccccatctc caggaggcag gtagagcagt
 720
 tctgaccgag aggatagact gctgttgctg tc
 752

```

      100      105      110
Pro Asp Thr Phe Val Asp Ala Phe Glu Arg Arg Ala Arg Ala Gln Pro
      115      120      125
Gly Arg Ala Leu Leu Val Trp Thr Gly Pro Gly Ala Gly Ser Val Thr
      130      135      140
Phe Gly Glu Leu Asp Ala Arg Ala Cys Gln Ala Ala Trp Ala Leu Lys
145      150      155      160
Ala Glu Leu Gly Asp Pro Ala Ser Leu Cys Ala Gly Glu Pro Thr Ala
      165      170      175
Leu Leu Val Leu Ala Ser Gln Ala Val Pro Ala Leu Cys Met Trp Leu
      180      185      190
Gly Leu Ala Lys Leu Gly Cys Pro Thr Ala Trp Ile Asn Pro His Gly
      195      200      205
Arg Gly Met Pro Leu Ala His Ser Val Leu Ser Ser Gly Ala Arg Val
      210      215      220
Leu Val Val Asp Pro Asp Leu Arg Glu Ser Leu Glu Glu Ile Leu Pro
225      230      235      240
Lys Leu Gln Ala Glu Asn Ile Arg Cys Phe Tyr Leu Ser His Thr Ser
      245      250      255
Pro Thr Pro Gly Val Gly Ala Leu Gly Ala Ala Leu Asp Ala Ala Pro
      260      265      270
Ser His Pro Val Pro Ala Asp Leu Arg Ala Gly Ile Thr Trp Arg Ser
      275      280      285
Pro Ala Leu Phe Ile Tyr Thr Ser Gly Thr Thr Gly Leu Pro Lys Pro
290      295      300
Ala Ile Leu Thr His Glu Arg Val Leu Gln Met Ser Lys Met Leu Ser
305      310      315      320
Leu Ser Gly Ala Thr Ala Asp Asp Val Val Tyr Thr Val Leu Pro Leu
      325      330      335
Tyr His Val Met Gly Leu Val Val Gly Ile Leu Gly Cys Leu Asp Leu
      340      345      350
Gly Ala Thr Cys Val Leu Ala Pro Lys Phe Ser Thr Ser Cys Phe Trp
      355      360      365
Asp Asp Cys Arg Gln His Gly Val Thr Val Ile Leu Tyr Val Gly Glu
370      375      380
Leu Leu Arg Tyr Leu Cys Asn Ile Pro Gln Gln Pro Glu Asp Arg Thr
385      390      395      400
His Thr Val Arg Leu Ala Met Gly Asn Gly Leu Arg Ala Asp Val Trp
      405      410      415
Glu Thr Phe Gln Gln Arg Phe Gly Pro Ile Arg Ile Trp Glu Val Tyr
      420      425      430
Gly Ser Thr Glu Gly Asn Met Gly Leu Val Asn Tyr Val Gly Arg Cys
      435      440      445
Gly Ala Leu Gly Lys Met Ser Cys Leu Leu Arg Met Leu Ser Pro Phe
450      455      460
Glu Leu Val Gln Phe Asp Met Glu Ala Ala Glu Pro Val Arg Asp Asn
465      470      475      480
Gln Gly Phe Cys Ile Pro Val Gly Leu Gly Glu Pro Gly Leu Leu Leu
      485      490      495
Thr Lys Val Val Ser Gln Gln Pro Phe Val Gly Tyr Arg Gly Pro Arg
      500      505      510
Glu Leu Ser Glu Arg Lys Leu Val Arg Asn Val Arg Gln Ser Gly Asp
515      520      525
Val Tyr Tyr Asn Thr Gly Asp Val Leu Ala Met Asp Arg Glu Gly Phe

```

ctctccgaa tgctgtcccc ctttgagctg gtgcagttcg acatggaggc ggcggagcct
 1500
 gtgagggaca atcagggtt ctgcatccct gtagggctag gggagccggg gctgctgctg
 1560
 accaaggtgg taagccagca acccttcgtg ggctaccgag gcccccgaga gctgtcggaa
 1620
 cggaagctgg tgcgcaacgt gcggcaatcg ggcgacgttt actacaacac cggggacgta
 1680
 ctggccatgg accgcgaagg cttcctctac ttccgcgacc gcctcgggga caccttccga
 1740
 tggaagggcg agaacgtgtc cacgcacgag gtggagggcg tgttgtcgca ggtggacttc
 1800
 ttgcaacagg ttaacgtgta tggcgtgtgc gtgccaggtt gtgagggtaa ggtgggcatg
 1860
 gctgctgtgc agctagcccc cgccagact ttcgacgggg agaagttgta ccagcacgtt
 1920
 cgcgcttggc tccctgccta cgctaccccc catttcatcc gcattccagga cgccatggag
 1980
 gtcaccagca cgttcaaact gatgaagacc cggttggtgc gtgagggtt caatgtgggg
 2040
 atcgtggttg accctctgtt tgtactggac aaccggggccc agtccttccg gccctgacg
 2100
 gcagaaatgt accaggctgt gtgtgaggga acctggaagc tctgatcacc tggccaaccc
 2160
 actggggtag gggtagggat caaagccagc cccccccacc ccaacacact cgggtgtccct
 2220
 ttcatacctg gcctgtgtga atcccagcct ggccataccc tcaacctcag tgggctggaa
 2280
 atgacagtgg gccctgtagc agtggcagaa taaactcaga tgtgttcaca aaaaaaaca
 2340
 cgcacaggtt ggagggcgtg ttgtcgcagg tggacttctt gcaacaggtt aacgtgtatg
 2400
 gcgtgtgcgt gccaggttgt gagggtaagg tgggcatggc tgctgtgcag ctagc
 2455

<210> 5342

<211> 690

<212> PRT

<213> Homo sapiens

<400> 5342

Met Gly Val Arg Gln Gln Leu Ala Leu Leu Leu Leu Leu Leu Leu
 1 5 10 15
 Leu Trp Gly Leu Gly Gln Pro Val Trp Pro Val Ala Val Ala Leu Thr
 20 25 30
 Leu Arg Trp Leu Leu Gly Asp Pro Thr Cys Cys Val Leu Leu Gly Leu
 35 40 45
 Ala Met Leu Ala Arg Pro Trp Leu Gly Pro Trp Val Pro His Gly Leu
 50 55 60
 Ser Leu Ala Ala Ala Ala Leu Ala Leu Thr Leu Leu Pro Ala Arg Leu
 65 70 75 80
 Pro Pro Gly Leu Arg Trp Leu Pro Ala Asp Val Ile Phe Leu Ala Lys
 85 90 95
 Ile Leu His Leu Gly Leu Lys Ile Arg Gly Cys Leu Ser Arg Gln Pro

<210> 5341

<211> 2455

<212> DNA

<213> Homo sapiens

<400> 5341

nnatgagctg caggtacggt ccggaatccc gggtcgaccc acgcgtccgg ctccatagga
60
ggagctggta ccatgggtgt caggcaacag ttggccttgc tgcgtctgct gctgctcctg
120
ctctggggcc tggggcagcc agtgtggcca gtcgctgtgg ccttgaccct gcgctggctc
180
ctgggggatc ccacatgttg cgtgctactt gggctggcca tgtagcacg gccctggctc
240
ggccccctggg tgccccatgg gctgagcctg gcagctgcgg ccctggcact aaccctcctg
300
ccagcacggc tgcccccagg actacgctgg ctgccggctg atgtgatctt cttggccaag
360
atcctccacc tgggcctgaa gatcagggga tgcttgagcc ggcagccgcc tgacacctt
420
gtagatgcct tcgagcggcg agcacgagcg cagcctggca gggcactctt ggtgtggacg
480
gggcctgggg ccggctcagt cacctttggt gagctggatg cccgggcctg ccaggcggca
540
tgggccctga aggctgagct gggtgacctg gcgagcctgt gtgccgggga gcctactgcc
600
ctccttgtgc tggcttccca ggccgttcca gccctgtgta tgtggctggg gctggccaag
660
ctgggctgcc caacagcctg gatcaaccgg catggccggg ggatgccctt ggcgcaactc
720
gtgctgagct ctggggcccg ggtgctggtg gtggacctag acctccggga gagcctggag
780
gagatccttc ccaagctgca ggctgagaac atccgtgct tctacctag ccatacctcc
840
cctacaccag ggggtggggc tctgggggct gccctggatg cagcgccctc ccacccagt
900
cctgctgacc tgcgtgctgg gatcacatgg agaagccctg cctcttcat ctatacctg
960
gggaccactg gcctcccga gccagccatc ctcacgcatg agcgggtact gcagatgagc
1020
aagatgctgt ccttatctgg ggccacagct gatgatgtgg ttacacggg cctgcctctg
1080
taccacgtga tgggacttgt cgttgggatc ctcggtgct tagatctcg agccacctgt
1140
gttctggccc ccaagttctc tacttctgct ttctgggatg actgtcggca gcatggcggtg
1200
acagtgatcc tgtatgtggg cgagctcctg cggctactgt gtaacattcc ccagcaacca
1260
gaggaccgga cacatacagt ccgcctggca atgggcaatg gactacgggc tgatgtgtgg
1320
gagaccttcc agcagcgctt cggctcctatt cggatctggg aagtctacgg ctccacagaa
1380
ggcaacatgg gcttagtcaa ctatgtgggg cgctcgggg ccctgggcaa gatgagctgc
1440

gatgctctta atgaaattgt gcgatgtatt tgtgagatgg atgaggagaa tggcttcacg
 420
 atccagtgtg aagagtgtct gtgttgccaa cacagcgtgt gcatggggct gctggaggag
 480
 agcattccag agcagtacat ctgctatata tgccgggacc caccaggtca gaggtggagt
 540
 gcaaaatata gttatgataa ggagtgggtg aataatggga gaatgtgcgg gttatcattt
 600
 ttcaaagaaa attattctca tctcaatgcc aaaaagatag tttctacaca tcacctgctt
 660
 gctgatgtct atggtgttac agaagtgtca cacgggctac agctgaagat tggaatacta
 720
 aagaataaac atcatcctga cttcatctc tgggcttgtt ccgggaagcg aaaagaccaa
 780
 gatcaaataa tagctggggg ggagaaaaaa atagctcaag acacagttaa tcgagaagaa
 840
 aaaaaaa
 847

<210> 5340

<211> 217

<212> PRT

<213> Homo sapiens

<400> 5340

His	Glu	Asn	Arg	Lys	Val	Val	Leu	Ser	Ile	Leu	Phe	Val	Tyr	Ile	Leu
1				5					10					15	
Asp	Leu	Ser	Asp	Val	Asp	Phe	Leu	Asp	Asp	Ser	Ser	Thr	Glu	Ser	Leu
			20					25					30		
Leu	Leu	Ser	Gly	Asp	Glu	Tyr	Asn	Gln	Asp	Phe	Asp	Ser	Thr	Asn	Phe
			35				40					45			
Glu	Glu	Ser	Gln	Asp	Glu	Asp	Asp	Ala	Leu	Asn	Glu	Ile	Val	Arg	Cys
			50				55				60				
Ile	Cys	Glu	Met	Asp	Glu	Glu	Asn	Gly	Phe	Met	Ile	Gln	Cys	Glu	Glu
65				70				75						80	
Cys	Leu	Cys	Trp	Gln	His	Ser	Val	Cys	Met	Gly	Leu	Leu	Glu	Glu	Ser
			85					90					95		
Ile	Pro	Glu	Gln	Tyr	Ile	Cys	Tyr	Ile	Cys	Arg	Asp	Pro	Pro	Gly	Gln
			100					105					110		
Arg	Trp	Ser	Ala	Lys	Tyr	Arg	Tyr	Asp	Lys	Glu	Trp	Leu	Asn	Asn	Gly
			115					120				125			
Arg	Met	Cys	Gly	Leu	Ser	Phe	Phe	Lys	Glu	Asn	Tyr	Ser	His	Leu	Asn
			130				135				140				
Ala	Lys	Lys	Ile	Val	Ser	Thr	His	His	Leu	Leu	Ala	Asp	Val	Tyr	Gly
145				150						155				160	
Val	Thr	Glu	Val	Leu	His	Gly	Leu	Gln	Leu	Lys	Ile	Gly	Ile	Leu	Lys
			165					170					175		
Asn	Lys	His	His	Pro	Asp	Leu	His	Leu	Trp	Ala	Cys	Ser	Gly	Lys	Arg
			180					185					190		
Lys	Asp	Gln	Asp	Gln	Ile	Ile	Ala	Gly	Val	Glu	Lys	Lys	Ile	Ala	Gln
			195				200						205		
Asp	Thr	Val	Asn	Arg	Glu	Glu	Lys	Lys							
			210				215								

tattacacta gggtttactt tgaaatatag tttaacaacca aatcaagtat aacatacata
 2520
 cactggcact ttagcacaag ggcaaaacttt aaaaacaagt tattttggac ctttaaaatt
 2580
 aggccatatt ataaaaaaca gtccacggtc ttacattcag caaattcata ctaaaatact
 2640
 ccatttttgt aagataaagg ccaagaaaac ttacatatg ctacaagttt attacagata
 2700
 tttacatggc tctttctccc ctaaggactt aaaattttca ca
 2742

<210> 5338

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5338

Met	Gly	Gly	Gly	Glu	Arg	Tyr	Asn	Ile	Pro	Ala	Pro	Gln	Ser	Arg	Asn
1				5					10					15	
Val	Ser	Lys	Asn	Gln	Gln	Gln	Leu	Asn	Arg	Gln	Lys	Thr	Lys	Glu	Gln
			20					25					30		
Asn	Ser	Gln	Met	Lys	Ile	Val	His	Lys	Lys	Lys	Glu	Arg	Gly	His	Gly
			35				40					45			
Tyr	Asn	Ser	Ser	Ala	Ala	Ala	Trp	Gln	Ala	Met	Gln	Asn	Gly	Gly	Lys
	50					55				60					
Asn	Lys	Asn	Phe	Pro	Asn	Gln	Ser	Trp	Asn	Ser	Ser	Leu	Ser	Gly	
65					70				75				80		
Pro	Arg	Leu	Leu	Phe	Lys	Ser	Gln	Ala	Asn	Gln	Asn	Tyr	Ala	Gly	Ala
			85					90					95		
Lys	Phe	Ser	Glu	Pro	Pro	Ser	Pro	Ser	Val	Leu	Pro	Lys	Pro	Pro	Ser
			100					105					110		
His	Trp	Val	Pro	Val	Ser	Phe	Asn	Pro	Ser	Asp	Lys	Glu	Ile	Met	Thr
		115					120					125			
Phe	Gln	Leu	Lys	Thr	Leu	Leu	Lys	Val	Gln	Val					
		130					135								

<210> 5339

<211> 847

<212> DNA

<213> Homo sapiens

<400> 5339

nngacacttt gagttactta taatagtgt tactataaga tataaagcag tcataattac
 60
 ctaagcttca aaaatctttt gtttccatgt ccagagacaa gtacagtaca gtattcttat
 120
 ttgtttgctc ccccttttta aaatatttaa tagcttatgt tcacttctca tagctccttt
 180
 ctttatgaaa aataacatga aaatagaaaa gttgttctaa gtatactttt tgtatatatt
 240
 ctagacttat cagatgtaga cttcctagat gattcttcaa cggagagttt gcttctgagt
 300
 ggggatgaat acaatcagga ctttgattca accaattttg aggaatctca ggatgaggat
 360

aatccttcag ataaggaaat aatgacattt caacttaaaa ccttacttaa agtacaggta
900
taaaataaga caaatgttta aatttagtta tgttcacgga tagttgtcaa ttggtctgaa
960
acaaattcgc tagggaatct atttgtgtag aactaattaa tgtaaaaaaa acagaccatc
1020
tcgtgttggtg tgcactgtga tataatggta gtatcagtgc aacttaaact aatgattgta
1080
cttgatatta agtgtttctca actgagtaac ttttaagtgg aaaccaagtt tagatttggg
1140
gagtgggtaaa ggaatcagct ttttctattg ttaggggaag acagtaattt atcattcatg
1200
gaccagtaga ttgttgaaag ttggtgaatc ggattataag cttctagcta acacaaggat
1260
tcagaattag gtaaacatct gaaggtttag tatattagaa acacccaaac cagtaatatg
1320
ctaacctgat gcactgctga aagaaaatgt gaatttttcg taataattgc attttagtga
1380
attgtacagt gggtggaag ggcatttggg gctcattaga atgagacata gtacacccca
1440
atggccctgt ttattaaatg tagtggatta agtgtctgtc aacaaataca caaaaccat
1500
tttttataga aacagtattt aatggtcact caatagcttt caaaatacat ttttgtatta
1560
cagcactgca caagctattc taatagtgtc ctggcctcat cattcctgca aagcttgctt
1620
tggggagttg gataatgtga aaattttaag tacctagggg agaaagagcc atgtaaatat
1680
ctgtaataaa cttgtagcat atgtaaagtt ttcttggcct ttatcttaca aaaatggagt
1740
attttagtat gaatttgctg aatgtaagac cgtggactgt tttttataat atggccta
1800
tttaaaggct caaaataact tgtttttaaa gtttgccctt gtgctaaagt gccagtgtat
1860
gtatgttata cttgatttgg ttgtaaacta tatttcaaag taaaccctag tgtaataagt
1920
tttataacta aaaagggtgc ttcacattca tatcatgtac attaagtact acataaactt
1980
gtcttttaggc tatcaatatt taacttgggc agtacttcat cttgatttat ttggagaaat
2040
acagcttagg catctgctta cctgcttagg catcaagagg tgccaaatta gaaaataggg
2100
cattaacaat caaaattttt aagctgaccc acatacttgc tactgggttc gcttatgttt
2160
aagcatttaa agttggcaaa acatgttata aatgtattat gcaagagttt acatcttttg
2220
cataagtggc ccattgggtt gcacctacc cttgaccaa caaaaacaaa acatcactgg
2280
caccatactc gaaactacct gtatcctagg ttataagatt gtgaaagcca acaatctata
2340
aggttggagg gactctagtt aatctttggg cttagaggag gaaaaaaga tagtcccata
2400
ctgcatttca catctcttaa aaatagtttt agcagcttaa accttttttag ttataaaact
2460

610	615	620
Ala Asp Gly Ile Glu Val Ser Tyr Asn Ala Cys Gly Val Leu Ser His		
625	630	635
Ile Met Phe Asp Gly Pro Glu Ala Trp Gly Val Cys Glu Pro Gln Arg		640
	645	650
Glu Glu Val Glu Glu Arg Met Trp Ala Ala Ile Gln Ser Trp Asp Ile		655
	660	665
Asn Ser Arg Arg Asn Ile Asn Tyr Arg Ser Phe Glu Pro Ile Leu Arg		670
	675	680
Leu Leu Pro Gln Gly Ile Ser Pro Val Ser Gln His Trp Ala Thr Trp		685
	690	700
Ala Leu Tyr Asn Leu Val Ser Val Tyr Pro Asp Lys Tyr Cys Pro Leu		
705	710	715
Leu Ile Lys Glu Gly Gly Met Pro Leu Leu Arg Asp Ile Ile Lys Met		720
	725	730
Ala Thr Ala Arg Gln Glu Thr Lys Glu Met Ala Arg Lys Val Ile Glu		735
	740	745
His Cys Ser Asn Phe Lys Glu Glu Asn Met Asp Thr Ser Arg		750
	755	760
		765

<210> 5337

<211> 2742

<212> DNA

<213> Homo sapiens

<400> 5337

```

tttttatgga tatttagttt tatttgatac acttgatgc aactttactc attaccattt
60
ttaaaccat gtttaaaagt tttaaaattt gggtagaggc agaaggagaa ggtcgggttg
120
tagaagctgg ggtggccggc agctcgctca tcggtgttcg tgggctttgt cggtcctgtc
180
ctcgtctctc tctggaagg gagggaggct tcgacgtcga gagggagccg ctgccgcgtt
240
agttccgagc ttgaagtcac taggacttct ctcaaacttg tgtgctgagg agactcagat
300
gttggectca gtccttaggc tgaactcagc agatcgcccc atgaaaactt ctgtattgag
360
acaaaggaag ggatctgtca gaaagcaaca cttgttatct tgggcttggc agcaaggaag
420
aggacaggta gtggagatcc tgcaatctga aaagcagact gaaaggtgac aaagaagctg
480
aagatgggtg gtggagagag gtataacatt ccagccctc aatctagaaa tgtagtaag
540
aaccaacaac agcttaacag acagaagacc aaggaacaga attcccagat gaagattgtt
600
cataagaaaa aagaaagg acatgggtat aactcatcag cagctgctg gcaggccatg
660
caaatgggg ggaagaacaa aaattttcca aataatcaaa gttggaattc tagcttatca
720
ggtcccaggt tactttttaa atctcaagct aatcagaact atgctggtgc caaatttagt
780
gagccgcat caccaagtgt tcttcccaaa ccaccaagcc actgggtccc tgtttcctt
840

```


	180		185		190
Ser	Leu	Leu	Arg	Pro	Leu
	195		200		205
Ile	Gln	Thr	Ser	Asp	Ala
	210		215		220
Val	Ser	Leu	Val	Leu	Tyr
	225		230		235
Val	Ile	Val	Gln	Leu	His
			245		250
Arg	Leu	Ser	Ser	Tyr	Tyr
			260		265
Leu	Phe	Val	Gln	Lys	Leu
	275		280		285
His	Met	Ile	Leu	Glu	Asn
	290		295		300
Gly	Gln	Thr	Ser	Ile	Glu
	305		310		315
Ala	Leu	Lys	Arg	Pro	Leu
			325		330
Cys	Arg	Leu	Thr	His	Ile
			340		345
Glu	Glu	Gln	Val	Leu	Asn
	355		360		365
Glu	Ile	Thr	Ser	Arg	Ala
	370		375		380
Glu	Arg	Cys	Asn	Gln	Leu
	385		390		395
Leu	Lys	Cys	His	Lys	Tyr
			405		410
Ala	Leu	Phe	Tyr	Leu	Thr
			420		425
Lys	Leu	Arg	Arg	Gln	Val
	435		440		445
Tyr	Gln	Glu	Val	Thr	Val
	450		455		460
Phe	Ser	Ile	Pro	Glu	Glu
	465		470		475
Leu	Leu	Leu	Ser	Ile	Leu
			485		490
Arg	Ile	Ala	Val	His	Leu
			500		505
Asp	His	Lys	Glu	Ala	Val
	515		520		525
Lys	Leu	Ile	Gln	Lys	Lys
	530		535		540
Glu	Phe	Ser	Trp	Ser	Ala
	545		550		555
Asn	Cys	Glu	Met	Phe	Leu
			565		570
Cys	Leu	Lys	Glu	Phe	Pro
			580		585
Gly	Leu	Leu	Gly	Asn	Val
	595		600		605
Met	Thr	Ser	Gln	Phe	Ile

ctgcctcctc ctcccagcct gccccgctgc ccagaggacc ccacgcctct cagaggcaga
 3660
 ggtcccatgc cagcctttga ccacacagcc gcctccagac cagcactcgg
 3720
 actgcctgc agtggccgct tgggcctccc tggcggtccc gcctgcctt aggctttacc
 3780
 ttggaagcct gagaggcgcc ggctctcttg ctctccatc gatggacact gcattgcttc
 3840
 tcatcggaca cttgtggagc gcaggggcct ggggagcagc gctaaccctg gaggcagcct
 3900
 ttgggtgatg gctttttctt cctttttctt cccgcggggc tgttttcagg tgttcctagc
 3960
 atttctgcct ccaggcagga cggcaggggt gaggagcttt gggagagaca cctggccttt
 4020
 ttctcctgga gcctctccct cccggccctg ggaagtgggc gcagccctgt gttccccag
 4080
 cttggcagat gggctgcatg cggcgctccc ttccttccca cgctcagcgg ccccggccag
 4140
 accctggcag acttcacacc tcattgcttt accccctggg gcctggggaa atgtctgtac
 4200
 tttgggaagt cacagaaata catttttggt caaatggaa aaaaaaaaaa aaaaaaaaaa
 4260
 aaaaaaaaaa aaaaaaaaaa aa
 4282

<210> 5336

<211> 766

<212> PRT

<213> Homo sapiens

<400> 5336

Met	Ala	Ser	Asp	Thr	Pro	Glu	Ser	Leu	Met	Ala	Leu	Cys	Thr	Asp	Phe
1				5					10					15	
Cys	Leu	Arg	Asn	Leu	Asp	Gly	Thr	Leu	Gly	Tyr	Leu	Leu	Asp	Lys	Glu
			20					25					30		
Thr	Leu	Arg	Leu	His	Pro	Asp	Ile	Phe	Leu	Pro	Ser	Glu	Ile	Cys	Asp
			35				40					45			
Arg	Leu	Val	Asn	Glu	Tyr	Val	Glu	Leu	Val	Asn	Ala	Ala	Cys	Asn	Phe
		50				55					60				
Glu	Pro	His	Glu	Ser	Phe	Phe	Ser	Leu	Phe	Ser	Asp	Pro	Arg	Ser	Thr
65					70				75					80	
Arg	Leu	Thr	Arg	Ile	His	Leu	Arg	Glu	Asp	Leu	Val	Gln	Asp	Gln	Asp
			85					90					95		
Leu	Glu	Ala	Ile	Arg	Lys	Gln	Asp	Leu	Val	Glu	Leu	Tyr	Leu	Thr	Asn
			100					105					110		
Cys	Glu	Lys	Leu	Ser	Ala	Lys	Ser	Leu	Gln	Thr	Leu	Arg	Ser	Phe	Ser
			115				120					125			
His	Thr	Leu	Val	Ser	Leu	Ser	Leu	Phe	Gly	Cys	Thr	Asn	Ile	Phe	Tyr
			130				135				140				
Glu	Glu	Glu	Asn	Pro	Gly	Gly	Cys	Glu	Asp	Glu	Tyr	Leu	Val	Asn	Pro
145					150					155				160	
Thr	Cys	Gln	Val	Leu	Val	Lys	Asp	Phe	Thr	Phe	Glu	Gly	Phe	Ser	Arg
			165					170					175		
Leu	Arg	Phe	Leu	Asn	Leu	Gly	Arg	Met	Ile	Asp	Trp	Val	Pro	Val	Glu

attcagaaga agctgctgga caagacatgt gaccagggtca tggagttctc ctggagtggc
2040
ctgtggaaca tcacagatga aactcctgac aactgcgaga tgttcctcaa tttcaacggc
2100
atgaagctct tcctggactg cctgaaggaa ttcccagaga agcaggaact gcataggaat
2160
atgctaggac ttttggggaa tgtggcagaa gtgaaggagc tgaggcctca actaatgact
2220
tcccagttca tcagcgtctt cagcaacctg ttggagagca aggccgatgg gatcgagggt
2280
tcctacaatg cctgcggcgt cctctcccac atcatgtttg atggaccgga ggccctggggc
2340
gtctgtgagc cccagcgtga ggaggtggag gaacgcatgt gggctgccat ccagagctgg
2400
gacataaact ctccggagaaa catcaattac aggtcatttg aaccaattct ccgcctcctt
2460
ccccagggaa tctctcctgt cagccagcac tgggcaacct gggccctgta taacctcgtg
2520
tctgtctacc cggacaagta ctgccctctg ctgatcaaag aaggggggat gcccttctg
2580
agggacataa ttaagatggc gaccgcacgg caggagacca aggaaatggc ccgcaagggt
2640
attgagcact gcagtaactt taaagaggag aacatggaca cgtctagata gaggcctccg
2700
tccccatggc cgccaccgct ctggaccaca ggcggggagg aagcatgctc aagcagccca
2760
gcgggcgggc cccttccgag ggagcctccc acggagtga gagacatggg ggacttttgc
2820
acaaccgacg cttttcctta atgttagtga gatatatata tattatatat atatattttt
2880
tttttggtta ggaagtgtga agttttgtgt gtatgatttc tgtgcaaaaa caaaagcaac
2940
actcctgagt ccttgcagct tccttggcca ttctcaaacc cactcagcct tcatcgctga
3000
cacacacact cctaccccaa ccagactaaa tgcctataac gctgtgagtg tccagtcctt
3060
gtccaggaaa ctcatgccc ggccctggctt cctttcatga gaggagcagg ccttggacag
3120
cgtatcgagc atcctgaccc actgccctg cctgagaacg ccatcttggc tcccgggcac
3180
agctgatggg gtttggggat tagaacttac cccactgggt ctcccaaaag ccttgggtgt
3240
cccggctgtg ggccatctgg ggcaggaaag tgagccattc ctaggctgag gtccaggcag
3300
ccctgccct gaagaccctc taggagcagg gcacccagt gcccctgctgc tgtccagcca
3360
ggcctgctg aggccacgt gctatggagg ctgcctccta gtctcccacc aggtcccagg
3420
ctgtggaaag cccagccca gggatgggtca gaactcgggg gcagattcca ctgccccttc
3480
tgccaaacac atccagaacc tgccctcagc cctggaagct agcatcttct ggggccaggg
3540
gcttgcttcc tcgtccata gccctcaact gccaggcgc tcccaccagc agaactgagc
3600

cctggagtgg cccacctgct tgcccccagc atggcgctccg acactcccga gtcgctgatg
420
gccctctgta ctgacttctg cttgcgcaac ctggatggca ccctgggcta cctgctggac
480
aaggagaccc tgcggctaca tccggacatc ttcttgccca gcgagatctg tgaccggctc
540
gtcaatgagt atgtggagct ggtgaacgct gcctgtaact tcgagccaca cgagagcttc
600
ttcagcctct ttctggaccc ccgcagcacc cgctcacgc ggatccacct ccgtgaggac
660
ctggtgcagg accaggacct ggaggccatc cgcaagcagg acctggtgga gctgtacctg
720
actaactgcg agaagctgtc cgccaagagc ctgcagacac tgaggagctt cagccacacc
780
ctggtgtcct tgagcctctt cggctgtaca aacattttct atgaggagga gaaccaggga
840
ggctgtgaag atgagtacct cgtcaacccc acctgccagg tgctggttaa ggatttcacc
900
ttcagaggct tcagccgct ccgcttcctc aacttgggcc gcatgattga ttgggtccct
960
gtggagtccc tgctgcggcc gcttaactcc ctggctgcct tggacctctc aggcattcag
1020
acgagcgacg cagccttctt caccagtggt aaagacagcc tgggtgtccct cgtcctctac
1080
aacatggacc tgtccgacga ccacatccgg gtcacgtgc agctgcacaa gctgcgacac
1140
ctggacatct cccgagaccg cctctccagc tactacaagt tcaagctgac tcggggagggtg
1200
ctgagcctct ttgtgcagaa gctggggaac ctaatgtccc tggacatctc tggccacatg
1260
atcctagaga actgcagcat ctccaagatg gaagaggaag cggggcagac cagcattgag
1320
ccttccaaga gcagcatcat acctttccgg gctctgaaga ggccgctgca gttcctcggg
1380
ctctttgaga actctctgtg ccgcctcacg cacattccag cctacaaagt aagtgggtgac
1440
aaaaacgaag agcagggtgt gaatgccatc gaggcctaca cggagcaccg gcctgagatc
1500
acctgcgggg ccatcaactt gctttttgac atcgcccga tcgagcgttg caaccagctg
1560
ctgcggggccc tgaagctggt catcacggcc ctcaagtgc acaaatatga caggaacatt
1620
caagtgcag gcagcgccgc tctcttctac ctaacaaatt ccgagtaccg ctgagagcag
1680
agtgtgaagc tgcgccgga ggttatccag gtggtgctga atggcatgga atcctaccag
1740
gagggtgacg tgcagcgga ctgctgcctg acgctctgca acttcagcat ccccgaggag
1800
ctggaattcc agtaccgccg ggtcaacgag ctctgtctca gcacctcaa cccacgcgg
1860
caggacgagt ctatccagcg gatcgccgtg cacctgtgca atgcctggt ctgccaggta
1920
gacaacgacc acaaggaggc cgtgggcaag atgggctttg tcgtgaccat gctgaagctg
1980

<400> 5334

Glu Pro Pro Gly Ala Val Val Leu Pro Arg Ser Leu Glu Val Gly Arg
 1 5 10 15
 Glu Arg Thr Trp Arg Pro Gly Ser Met Ala Gly Leu Glu Leu Leu Ser
 20 25 30
 Asp Gln Gly Tyr Arg Val Asp Gly Arg Arg Xaa Arg Glu Leu Arg Lys
 35 40 45
 Ile Gln Ala Arg Met Gly Val Phe Ala Gln Ala Asp Gly Ser Ala Tyr
 50 55 60
 Ile Glu Gln Gly Asn Thr Lys Ala Leu Ala Val Val Tyr Gly Pro His
 65 70 75 80
 Glu Ile Arg Gly Ser Arg Ala Arg Ala Leu Pro Asp Arg Ala Leu Val
 85 90 95
 Asn Cys Gln Tyr Ser Ser Ala Thr Phe Ser Thr Gly Glu Arg Lys Arg
 100 105 110
 Arg Pro His Gly Asp Arg Lys Ser Cys Glu Met Gly Leu Gln Leu Arg
 115 120 125
 Gln Thr Phe Glu Ala Ala Ile Leu Thr Gln Leu His Pro Arg Ser Gln
 130 135 140
 Ile Asp Ile Tyr Val Gln Val Leu Gln Ala Asp Gly Gly Thr Tyr Ala
 145 150 155 160
 Ala Cys Val Asn Ala Ala Thr Leu Ala Val Leu Asp Ala Gly Ile Pro
 165 170 175
 Met Arg Asp Phe Val Cys Ala Cys Ser Ala Gly Phe Val Asp Gly Thr
 180 185 190
 Ala Leu Ala Asp Leu Ser His Val Glu Glu Ala Ala Gly Gly Pro Gln
 195 200 205
 Leu Ala Leu Ala Leu Leu Pro Ala Ser Gly Gln Ile Ala Leu Leu Glu
 210 215 220
 Met Asp Ala Arg Leu His Glu Asp His Leu Glu Arg Val Leu Glu Ala
 225 230 235 240
 Ala Ala Gln Ala Ala Arg Asp Val His Thr Leu Leu Asp Arg Val Val
 245 250 255
 Arg Gln His Val Arg Glu Ala Ser Ile Leu Leu Gly Asp
 260 265

<210> 5335

<211> 4282

<212> DNA

<213> Homo sapiens

<400> 5335

gccggatcgg cggaggggcc gggccaggga gcctcagccc cgccggcagc cctaaggcga
 60
 aggttaaccgc cacggggtcc ccgtcgcgac cccctccctc ccggagctcc cgtccccggg
 120
 atcccaagct ccgccccgcc gacccccgtc tcccttgagc cccggctcta gcctgacgag
 180
 atccccaacc tcttgagggtg ctctggcccc ggattctccc gggctgcatt ctctgtcct
 240
 cctcgctgc gaagcatcac gtccgcttcc cgacgctgag ggcagccccg tccagggcag
 300
 tggctctgcc aatgatcctg tgagtattca ggaatcactg ttgcccttgg ggatccttgt
 360

<213> Homo sapiens

<400> 5332

```

Lys Phe Ala Leu Glu Tyr Arg Thr Thr Arg Glu Arg Val Leu Gln Gln
 1           5           10           15
Lys Gln Lys Arg Ala Asn His Arg Glu Arg Asn Lys Thr Arg Gly Lys
 20           25           30
Met Ile Thr Asp Ser Gly Lys Phe Ser Gly Ser Ser Pro Ala Pro Pro
 35           40           45
Ser Gln Pro Gln Gly Leu Ser Tyr Ala Xaa Gly Arg Gly
 50           55           60

```

<210> 5333

<211> 883

<212> DNA

<213> Homo sapiens

<400> 5333

```

gagccgccgg gagctgtagt tctcccgagg tcactggaag taggcagaga gcggacctgg
60
cgcccgggca gcatggcggg gctggagctc ttgtcgacc agggctaccg ggtggacggg
120
cggcgcnngc gggagctgcg caagatccag gcgcggatgg gcgtgttcgc gcaggctgac
180
ggctcggcct acattgagca gggcaacacc aaggcactgg ctgtgggtcta cgcccgcac
240
gagatccggg gctcccgggc tcgagccctg ccggacaggg ccctagtga ctgtcaatat
300
agttcagcga ccttcagcac aggtgagcgc aagcgacggc cacatgggga ccgtaagtcc
360
tgtgagatgg gcctgcagct ccgccagact ttcgaagcag ccatactcac acagctgcac
420
ccacgctccc agattgatat ctatgtgcag gtgctacagg cagatgggtgg gacctatgca
480
gcttgtgtga atgcagccac gctggcagtg ctggatgccg ggatacccat gagagacttt
540
gtgtgtgcgt gctcagctgg ctctgtggac ggcacagccc tggcggacct cagccatgtg
600
gaggaagcag ctggtggccc ccagctggcc ctggccctgc tgccagcctc aggacagatt
660
gcgctgcttg agatggatgc ccgctgcac gaggaccacc tggagcgggt gttggaggct
720
gctgcccagg ctgcccgaga tgtgcacacc ctcttagatc gagtgggtccg gcagcatgtg
780
cgtgaggcct ctatcttgct gggggactga ccaccagcc acccatgtcc agaataaaac
840
cctcctctgc ccacaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
883

```

<210> 5334

<211> 269

<212> PRT

<213> Homo sapiens

260 265 270
 His Pro Glu Ala Ala Gln Glu Ile Glu Val Glu Leu Glu Leu Ser Lys
 275 280 285
 Glu Met Val Ser Leu Leu Pro Thr Lys Met Glu Arg Phe Arg Thr Lys
 290 295 300
 Met Ala Leu Thr
 305

<210> 5331

<211> 1069

<212> DNA

<213> Homo sapiens

<400> 5331

aaatttgcac tagagtatcg cacaaccagg gaaaggggtt tgcagcagaa acagaaacgg
 60
 gcccaaccaca gagagagaaa taagaccaga gggaagatga tcaccgattc tggcaagttc
 120
 tccggcagtt ctccggcgcc cccaagccag ccgcagggtc tgagctatgc gngaggacgc
 180
 ggctgagcac gagaacatga aggtgtgtgt gaaaacctcg tccccctcgc tggaggacgc
 240
 cccccccgcg ctgggcgtcc gcacacgcag ccgagcaagc cgnnaggatc cactagtctc
 300
 tggactatgg gaactgatga ctgcaccaat gtcacagatg atgcagctga tgagatcatg
 360
 gaccgcacgc tcaagtcagc cacccaagtg ccagtcagc gagtgggtgc gagggagagg
 420
 aaacgatccc gggccaaccg gaaatctttg cgaagaacct tgaagagcgg cctgacccca
 480
 gaagaagcca gagccctggg ctgggttggc acctcgaggt tgcagctgtg aactcatag
 540
 gttactccca ggagtgtgct gagcagaagg caagctcttg ctggatgaaa ccctccagg
 600
 tggggttggg gagacttgat attcacatcc aacagtttga aaaggagag ctcaattccc
 660
 agcgtcaccc catggcttgt gttgcctgct acgcattgac ttggatctcc aggagtcccc
 720
 tgcacatacc ttctccatcg tgcagctgtg gttctctttg attccgtgac acccggttta
 780
 ttagttcaaa agtgtgacac cttttctggg caaggaacag cccctttaag gagcaaatca
 840
 cttctgtcac agttattatg gtaatatgag gcaatctgat tagcttcaca gactgagtct
 900
 ccacaacacc aaaatatcca gatgtaaacc ccaaacttgt acacaaaaga aagcacagat
 960
 tgtttacctg ttgtggattt tagatgtaac aaatgtttat acaaatacat acatgtacac
 1020
 catgtttcaa atactaaata aatagagttt aatgccaaaa aaaaaaaaaa
 1069

<210> 5332

<211> 61

<212> PRT

tacagacatt tctaccctca gtttctaaat gtagactatt tgttggttag tacttgatag
 2280
 attccttgta agaaaaaatg ctgggtaatg tacctggtaa caagcctgtt aatatattaa
 2340
 gattgaaaaa gtaacttcta tagttactcc ttctaaaata tttgacttcc tacattcccc
 2400
 ccacccaaaa tctttccctt ttgaaaatac taaaaactaa gttatgttat tataaagtgt
 2460
 aaaatgggtt gtcttaatta taggagaaaa aggccttggt agaaataaaa taaactgact
 2520
 tatttcta atgaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagaaaaa
 2580
 aa
 2582

<210> 5330

<211> 308

<212> PRT

<213> Homo sapiens

<400> 5330

Trp	Ile	Lys	Tyr	Cys	Leu	Thr	Leu	Met	Gln	Asn	Ala	Gln	Leu	Ser	Met
1				5					10					15	
Gln	Asp	Asn	Ile	Gly	Glu	Leu	Asp	Leu	Asp	Lys	Gln	Ser	Glu	Leu	Arg
		20					25						30		
Ala	Leu	Arg	Lys	Lys	Glu	Leu	Asp	Glu	Glu	Glu	Ser	Ile	Arg	Lys	Lys
		35					40					45			
Ala	Val	Gln	Phe	Gly	Thr	Gly	Glu	Leu	Cys	Asp	Ala	Ile	Ser	Ala	Val
	50					55					60				
Glu	Glu	Lys	Val	Ser	Tyr	Leu	Arg	Pro	Leu	Asp	Phe	Glu	Glu	Ala	Arg
65					70					75				80	
Glu	Leu	Phe	Leu	Leu	Gly	Gln	His	Tyr	Val	Phe	Glu	Ala	Lys	Glu	Phe
			85						90					95	
Phe	Gln	Ile	Asp	Gly	Tyr	Val	Thr	Asp	His	Ile	Glu	Val	Val	Gln	Asp
		100						105					110		
His	Ser	Ala	Leu	Phe	Lys	Val	Leu	Ala	Phe	Phe	Glu	Thr	Asp	Met	Glu
		115					120					125			
Arg	Arg	Cys	Lys	Met	His	Lys	Arg	Arg	Ile	Ala	Met	Leu	Glu	Pro	Leu
		130				135					140				
Thr	Val	Asp	Leu	Asn	Pro	Gln	Tyr	Tyr	Leu	Leu	Val	Asn	Arg	Gln	Ile
145					150					155				160	
Gln	Phe	Glu	Ile	Ala	His	Ala	Tyr	Tyr	Asp	Met	Met	Asp	Leu	Lys	Val
			165						170					175	
Ala	Ile	Ala	Asp	Arg	Leu	Arg	Asp	Pro	Asp	Ser	His	Ile	Val	Lys	Lys
		180					185					190			
Ile	Asn	Asn	Leu	Asn	Lys	Ser	Ala	Leu	Lys	Tyr	Tyr	Gln	Leu	Phe	Leu
		195					200					205			
Asp	Ser	Leu	Arg	Asp	Pro	Asn	Lys	Val	Phe	Pro	Glu	His	Ile	Gly	Glu
		210				215					220				
Asp	Val	Leu	Arg	Pro	Ala	Met	Leu	Ala	Lys	Phe	Arg	Val	Ala	Arg	Leu
225					230					235				240	
Tyr	Gly	Lys	Ile	Ile	Thr	Ala	Asp	Pro	Lys	Lys	Glu	Leu	Glu	Asn	Leu
			245						250					255	
Ala	Thr	Ser	Leu	Glu	His	Tyr	Lys	Phe	Ile	Val	Asp	Tyr	Cys	Glu	Lys

gaagcactat ataatcagta tatgaaagag gttgggagtc ctctctttga tcctactgag
660
cgttttcttc ctgaagaaga gaaacttact gaacaagaga gatcaaaaag atttgaaaag
720
gtttatactc ataacctata ttacctagct caagtctacc agcatctgga aatgtttgag
780
aaggctgctc actattgcca tagtacacta aaacgccagc ttgagcacia tgcctaccat
840
cctatagagt gggctatcaa tgctgctacc ttgtcacagt tttacatcaa taagctatgc
900
tttatggagg ccaggcactg tttatcagct gctaattgtca tttttggtca aactggaaaag
960
atctcagcca cagaagacac tcctgaagct gaaggagaag tgccagagct ttatcatcaa
1020
agaaaggggg aaatagcaag gtgctggatc aaatactgtt tgactctcat gcagaatgcc
1080
caactctcca tgcaggacaa cataggagag cttgatcttg ataaacagtc tgaacttaga
1140
gctttaagga aaaaagaact agatgaggag gaaagcattc ggaaaaaagc tgtgcagttt
1200
ggaaccggtg aactgtgtga tgccatctct gcagtagaag agaaagttag ctacttgaga
1260
ccttttagatt ttgaagaagc cagagaactt ttcttattgg gtcagcacta tgtctttgag
1320
gcaaaagagt tctttcagat tgatgggtat gtcactgacc atattgaagt tgtccaagac
1380
cacagtgtc tgtttaaggt gcttgcatc tttgaaactg acatggagag acggtgcaag
1440
atgcataaac gcagaatagc catgctagag cccctaactg tagacctgaa tccacagtat
1500
tatctgttgg tcaacagaca gatccagttt gaaattgcac atgcttacta tgatatgatg
1560
gatttgaagg ttgccattgc tgacaggcta agggaccccg actcacacat tgtaaaaaaa
1620
ataaataatc ttaataagtc ggcaactcaag tactaccagc tcttctaga ctccctgaga
1680
gacccaaaca aagtctttcc tgagcacatc ggggaagacg tctccgccc ggccatgtta
1740
gctaaattcc gggtagctcg tctgtatggc aaaatcatta ctgcagatcc caagaaagag
1800
ctggaaaatt tggcaacatc attggaacat taaaaattta ttgttgatta ctgtgaaaag
1860
catctgagg ccgcccagga aatagaagtt gagctagaac ttagtaaaga gatgggttagt
1920
cttctcccaa caaaaatgga gagattcaga accaagatgg ccctgactta atccttgttt
1980
ttaaagaaag gaaatgtgca atattgaagt gatctttttc cctagtcaga caggcccaat
2040
tccattgtga tgtttacctt tatagccagg tgagtgcagt ttgaacttga gatacagtca
2100
actgagtgtt tgctaggatc ctaaggaaca taaagttaat taaaaactta cacctaatta
2160
tgtaaattgc cttgttaaag acatgtgatt tgtattttag atgcttgttt cctattaaaa
2220

485 490 495
 Asp Asp Ser Tyr Thr Cys Glu Cys Pro Arg Gly Phe His Gly Lys His
 500 505 510
 Cys Glu Lys Ala Arg Pro His Leu Cys Ser Ser Gly Pro Cys Arg Asn
 515 520 525
 Gly Gly Thr Cys Lys Glu Ala Gly Gly Glu Tyr His Cys Ser Cys Pro
 530 535 540
 Tyr Arg Phe Thr Gly Arg His Cys Glu Ile Gly Lys Pro Asp Ser Cys
 545 550 555 560
 Ala Ser Gly Pro Cys His Asn Gly Gly Thr Cys Phe His Tyr Ile Gly
 565 570 575
 Lys Tyr Lys Cys Asp Cys Pro Pro Gly Phe Ser Gly Arg His Cys Glu
 580 585 590
 Ile Ala Pro Ser Pro Cys Phe Arg Ser Pro Cys Val Asn Gly Gly Thr
 595 600 605
 Cys Glu Asp Arg Asp Thr Asp Phe Phe Cys His Cys Gln Ala Gly Tyr
 610 615 620
 Met Gly Arg Arg Cys Gln Ala Glu Val Asp Cys Gly Pro Pro Glu Glu
 625 630 635 640
 Val Lys His Ala Thr Leu Arg Phe Asn Gly Thr Arg Leu Gly Ala Val
 645 650 655
 Ala Leu Tyr Ala Cys Asp Arg Gly Tyr Ser Leu Ser Ala Pro Ser Arg
 660 665 670
 Ile Arg Val Cys Gln Pro His Gly Val Trp Ser Glu Pro Pro Gln Cys
 675 680 685
 Leu Gly Asp Ser Val Gly
 690

<210> 5329

<211> 2582

<212> DNA

<213> Homo sapiens

<400> 5329

nngggccgca acgtgtcgag agccgtaagt aaagtgtcgc aaagcagaag gaaggcggga
 60
 gtccccgactg caaacattga ggaaagccag gcagtagagg ccgctatggc gaacgttccg
 120
 tgggcagagg tctgcgagaa attccaggcg gcgctcgctc tgtcgcgggt ggaactgcat
 180
 aaaaatccgg agaaggaacc atacaagtcc aaatacagcg cccgggcgct actggaagag
 240
 gtcaaggcgc tgctcgcccc tgcgcctgag gacgaggatg agcggcctga ggccgaggac
 300
 ggccccgggtg ccggtgacca cgccctgggg ctgccggctg aggtggtgga gcccagaggg
 360
 cccgtcgccc agcgagcggg gaggtgggca gtcacagagt tccacctcgg ggtgaaccac
 420
 atcgacacgg aggagctgtc ggcgggggag gagcacctgg tgaaatgcct gcggtgctg
 480
 cgcaggtacc ggctctcgca cgactgcatc tctctctgca tccaggcgca gaataacctg
 540
 ggtatcttgt ggtctgaaa agagaaaatt gaaactgcac aggtttacct agagtcacca
 600

50	55	60													
Ala Thr Glu Asp Val Arg His Tyr Phe Pro Glu Leu Leu Asp Phe Asn															
65	70	75	80												
Ala Thr Trp Val Phe Val Ala Thr Trp Tyr Arg Val Thr Phe Phe Gly															
	85	90	95												
Gly Ser Ser Ser Ser Pro Val Asn Thr Phe Gln Thr Val Leu Ile Thr															
	100	105	110												
Asp Gly Lys Leu Ser Phe Thr Ile Phe Asn Tyr Glu Ser Ile Val Trp															
	115	120	125												
Thr Thr Gly Thr His Ala Ser Ser Gly Gly Asn Ala Thr Gly Leu Gly															
	130	135	140												
Gly Ile Ala Ala Gln Ala Gly Phe Asn Ala Gly Asp Gly Gln Arg Tyr															
145	150	155	160												
Phe Ser Ile Pro Gly Ser Arg Thr Ala Asp Met Ala Glu Val Glu Thr															
	165	170	175												
Thr Thr Asn Val Gly Val Pro Gly Arg Trp Ala Phe Arg Ile Asp Asp															
	180	185	190												
Ala Gln Val Arg Val Gly Gly Cys Gly His Thr Thr Ser Val Cys Leu															
	195	200	205												
Ala Leu Arg Pro Cys Leu Asn Gly Gly Lys Cys Ile Asp Asp Cys Val															
	210	215	220												
Thr Gly Asn Pro Ser Tyr Thr Cys Ser Cys Leu Ser Gly Phe Thr Gly															
225	230	235	240												
Arg Arg Cys His Leu Asp Val Asn Glu Cys Ala Ser Gln Pro Cys Gln															
	245	250	255												
Asn Gly Gly Thr Cys Thr His Gly Ile Asn Ser Phe Arg Cys Gln Cys															
	260	265	270												
Pro Ala Gly Phe Gly Gly Pro Thr Cys Glu Thr Ala Gln Ser Pro Cys															
	275	280	285												
Asp Thr Lys Glu Cys Gln His Gly Gly Gln Cys Gln Val Glu Asn Gly															
	290	295	300												
Ser Ala Val Cys Val Cys Gln Ala Gly Tyr Thr Gly Ala Ala Cys Glu															
305	310	315	320												
Met Asp Val Asp Asp Cys Ser Pro Asp Pro Cys Leu Asn Gly Gly Ser															
	325	330	335												
Cys Val Asp Leu Val Gly Asn Tyr Thr Cys Leu Cys Ala Glu Pro Phe															
	340	345	350												
Lys Gly Leu Arg Cys Glu Thr Gly Asp His Pro Val Pro His Ala Cys															
	355	360	365												
Leu Ser Ala Pro Cys His Asn Gly Gly Thr Cys Val Asp Ala Asp Gln															
	370	375	380												
Gly Tyr Val Cys Glu Cys Pro Glu Gly Phe Met Gly Leu Asp Cys Arg															
385	390	395	400												
Glu Arg Val Xaa Pro Met Thr Val Ser Ala Ala Thr Glu Ala Asp Ala															
	405	410	415												
Trp Ala Pro Thr Pro Pro Ser Ala His Ala Pro Cys Gly Xaa Ser Leu															
	420	425	430												
Gly Phe Ser Val Asn Leu Lys Ser Gln Pro Xaa Pro Cys Asn Met Asn															
	435	440	445												
Thr Gln Cys Pro Asp Gly Gly Tyr Cys Met Glu His Gly Gly Ser Tyr															
	450	455	460												
Leu Cys Val Cys His Thr Asp His Asn Ala Ser His Ser Leu Pro Ser															
465	470	475	480												
Pro Cys Asp Ser Asp Pro Cys Phe Asn Gly Gly Ser Cys Asp Ala His															

gtggagaacg gctctgcggt gtgtgtgtgc caggccggat acaccggagc agcctgcgag
 960
 atggatgtgg acgactgcag ccctgacccc tgcctgaatg gaggtctctg tgttgacctg
 1020
 gtggggaatt acacctgctt gtgtgccgag cccttcaagg gacttcgctg tgagacagga
 1080
 gaccatccag tgccacacgc ctgcctctcg gcccttgcc acaatggggg cacctgtgtg
 1140
 gatgcggacc agggctacgt gtgcgagtgc cccgaaggct tcatgggcct ggactgcagg
 1200
 gagagagtcn ncccgatgac tgtgagtgcc gcaacggagg cagatgcctg ggcgccaaca
 1260
 ccaccctctg cccatgcccc ctgcggannt tctttgggct tctctgtgaa tttgaaatca
 1320
 cagccantgc cctgcaacat gaacacacag tgcccagatg ggggctactg catggagcac
 1380
 ggcgggagct acctctgcgt ctgccacacc gaccacaatg ccagccactc cctgccatca
 1440
 ccctgcgact cggacccctg cttcaacgga ggctcctgcg atgcccatga cgactcctac
 1500
 acctgcgagt gcccgcgcg gttccacggc aagcactgcg agaaagcccg gccacacctg
 1560
 tgcagctcag ggccctgccg gaacgggggc acgtgcaagg aggcgggcgg cgagtaccac
 1620
 tgcagctgcc cctaccgctt cactgggagg cactgtgaga tcgggaagcc agactcgtgt
 1680
 gcctctggcc cctgtcacia cggcggcacc tgcttccact acattggcaa atacaagtgt
 1740
 gactgtcccc caggcttctc cggcgggcac tgcgagatag cccctcccc ctgcttccgg
 1800
 agcccgtgtg tgaatggggg cacctgcgag gaccgggaca cggatttctt ctgccactgc
 1860
 caagcagggg acatgggacg ccgatgccag gcagaggtgg actgcggccc cccggaggag
 1920
 gtgaagcacg ccacactgcg cttcaacggc acgcggctgg gcgcggtggc cctgtatgca
 1980
 tgtgaccgtg gctacagcct gagcgcccc agccgcatcc gggctctgcca gccacacggg
 2040
 gtctggagtg agcctcccc gtgccttggt gattctgtgg gcc
 2084

<210> 5328

<211> 694

<212> PRT

<213> Homo sapiens

<400> 5328

Glu	His	Ser	Gly	Leu	Tyr	Val	Asn	Asn	Asn	Gly	Ile	Ile	Ser	Phe	Leu
1				5					10					15	
Lys	Glu	Val	Ser	Gln	Phe	Thr	Pro	Val	Ala	Phe	Pro	Ile	Ala	Lys	Asp
			20						25				30		
Arg	Cys	Val	Val	Ala	Ala	Phe	Trp	Ala	Asp	Val	Asp	Asn	Arg	Arg	Ala
		35					40				45				
Gly	Asp	Val	Tyr	Tyr	Arg	Glu	Ala	Thr	Asp	Pro	Ala	Met	Leu	Arg	Arg

	100		105		110
Arg Gly Leu Asp Gly Arg Val Leu Tyr Trp Pro Arg Gly Arg Val Trp					
	115		120		125
Gly Gly Ser Ser Ser Leu Asn Ala Met Val Tyr Val Arg Gly His Ala					
	130		135		140
Glu Asp Tyr Glu Arg Trp Gln Arg Gln Gly Ala Arg Gly Trp Asp Tyr					
145		150		155	160
Ala His Cys Leu Pro Tyr Phe Arg Lys Ala Gln Gly His Xaa Ala Gly					
	165		170		175
Arg Gln Pro Val Pro Gly Arg Asp Gly Pro Leu Arg Val Ser Arg Gly					
	180		185		190
Lys Thr Asn His Pro Leu His Cys Ala Phe Leu Glu Ala Thr Gln Gln					
	195		200		205
Ala Gly Tyr Pro Leu Thr Glu Asp Met Asn Gly Phe Gln Gln Glu Gly					
	210		215		220
Phe Gly Trp Met Asp Met Thr Ile His Glu					
225		230			

<210> 5327

<211> 2084

<212> DNA

<213> Homo sapiens

<400> 5327

gagcactccg gactctacgt gaacaacaac gggatcatct ccttcctgaa ggaggtttct
 60
 cagttcaccc cagtggcctt cccattgcc aaggaccgct gcgtggtggc agccttctgg
 120
 gcagatgtgg acaaccggcg tgcaggcgac gtgtactacc gggaggccac cgaccagcc
 180
 atgtgcgcc gagccacgga ggacgtcagg cactacttcc ccgagctcct ggacttcaat
 240
 gccacctggg tttttgttgc cacctggtac cgagtgcct tctttggagg cagttcctca
 300
 tcccctgtca acacattcca gactgtgtc atcacagacg gcaagctctc cttcaccatc
 360
 ttcaactatg agtccatcgt gtggaccaca ggcacacacg ccagcagcgg gggcaacgcc
 420
 actggcctcg ggggcatcgc agcccaggct ggcttcaacg caggcgatgg gcagcgttac
 480
 ttcagtatcc ccggctcgcg cacagcagac atggccgagg tggagaccac caccaacgtg
 540
 ggtgtgcccc ggcgctgggc gttcagaatc gatgatgcc aggtgcgcgt ggggggctgc
 600
 ggccatacaa cgtcctgtg cctggccctg cgcccctgcc tcaacggcgg caagtgcac
 660
 gacgactgcg tcacgggcaa cccctctac acctgctcct gcctctcggg cttcacggg
 720
 cggaggtgcc acctggacgt gaacgaatgt gcctcccagc cctgtcagaa tgggtggacc
 780
 tgtactcag gcataacag tttccgctgc cagtgcgccg ctggctttgg gggaccacc
 840
 tgtgagacag cccaatcccc ctgtgacacc aaagagtgtc aacatggtgg ccagtgccag
 900

<400> 5325

gccggcgccg ccggttaaag tgccgcgggg caggggcccgg gccgcggcca cccgctcctc
 60
 ccgctccggg cccgactgtc gggctctcgg ccgagtcgcc ccggacaatc acaaagagtg
 120
 tgtaggccag ccccggtcac agagtgcacc gtatcctgtc acttctggat gtgagggaga
 180
 agtgagtcac ctcatcctcc tccgtggatc agaggacttg gactagatag aagcatgtgg
 240
 tgtctcctac gaggcctggg ccggcctgga gccctggcac ggggagccct ggggcagcag
 300
 caatccctgg gtgcccgggc cctggccagc gcaggctctg agagccggga cgagtacagc
 360
 tatgtggtgg tgggcgcggg ctgcggcggg tgctgtctgg ctgggaggct cacggaggac
 420
 cccgccgagc gcgtgctgct gctggaggcc gggcccaagg acgtgcgcgc ggggagcaag
 480
 cggctctcgt ggaagatcca catgcccgcg gccctgggtg ccaacctgtg cgacgacagg
 540
 tacaactggt gctaccacac agaggtgcag cggggcctgg acggccgcgt gctgtactgg
 600
 ccacgcggcc gcgtctgggg tggctcctca tccctcaatg ccatggtcta cgtccgtggg
 660
 cagcccgagg actacgagcg ctggcagcgc cagggcgccc gcggctggga ctacgcgcac
 720
 tgcctgccct acttccgcaa ggcgcagggc cacngagctg ggcgccagcc ggtaccgggg
 780
 cgcgatggcc cgctgcgggt gtcccggggc aagaccaacc acccgctgca ctgcgcattc
 840
 ctggaggcca cgcagcaggc cggctacccg ctcaccgagg acatgaatgg cttccagcag
 900
 gagggcttcg gctggatgga catgaccatc catgaagg
 938

<210> 5326

<211> 234

<212> PRT

<213> Homo sapiens

<400> 5326

Met Trp Cys Leu Leu Arg Gly Leu Gly Arg Pro Gly Ala Leu Ala Arg
 1 5 10 15
 Gly Ala Leu Gly Gln Gln Gln Ser Leu Gly Ala Arg Ala Leu Ala Ser
 20 25 30
 Ala Gly Ser Glu Ser Arg Asp Glu Tyr Ser Tyr Val Val Val Gly Ala
 35 40 45
 Gly Ser Ala Gly Cys Val Leu Ala Gly Arg Leu Thr Glu Asp Pro Ala
 50 55 60
 Glu Arg Val Leu Leu Leu Glu Ala Gly Pro Lys Asp Val Arg Ala Gly
 65 70 75 80
 Ser Lys Arg Leu Ser Trp Lys Ile His Met Pro Ala Ala Leu Val Ala
 85 90 95
 Asn Leu Cys Asp Asp Arg Tyr Asn Trp Cys Tyr His Thr Glu Val Gln

180 185 190
 Gln Tyr Lys Ala Pro Thr Glu Asn His His Asn Arg Pro Tyr Tyr Ala
 195 200 205
 Lys

<210> 5323
 <211> 475
 <212> DNA
 <213> Homo sapiens

<400> 5323
 gcgcgcccag ggtctggcag acacgaaaca gccaggagct gtggcaacat aactgcatgc
 60
 tgactggccc gcctcagtga tgccaggccc actgacagca gcagagagcg aggggcagtc
 120
 catagctgcc aggcctttct gcccacacca cgccacttat atggcctcct gccatgggca
 180
 gagtagggag gtgaggtgct cgtgggtgccc agagtctctca tcaaggagtg aaaccagagt
 240
 gtggccatag ccagtaagaa cagcacgctg cagcccagcc catcagcctc aggcactgag
 300
 ctctctgcac actccatgaa tgcagagcag catcaggctg gcctcagccc cttcccgtct
 360
 taggccagcc ccaaggggtgc tgtggttctt cgggatgccca gagctcccc aagctgtggc
 420
 tgtgcctggc tgggaccttt cccctcctg ctcaggggaag tttccacccc ccggg
 475

<210> 5324
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 5324
 Met Glu Cys Ala Glu Ser Ser Val Pro Glu Ala Asp Gly Leu Gly Cys
 1 5 10 15
 Ser Val Leu Phe Leu Leu Ala Met Ala Thr Leu Trp Phe His Ser Leu
 20 25 30
 Met Arg Thr Leu Gly Thr Thr Ser Thr Ser Pro Pro Tyr Ser Ala His
 35 40 45
 Gly Arg Arg Pro Tyr Lys Trp Arg Gly Val Gly Arg Lys Ala Trp Gln
 50 55 60
 Leu Trp Thr Ala Pro Arg Ser Leu Leu Leu Ser Val Gly Leu Ala Ser
 65 70 75 80
 Leu Arg Arg Ala Ser Gln His Ala Val Met Leu Pro Gln Leu Leu Ala
 85 90 95
 Val Ser Cys Leu Pro Asp Pro Gly Arg
 100 105

<210> 5325
 <211> 938
 <212> DNA
 <213> Homo sapiens

aaaaggggaag gtaaattggca taaatatggt cgcactaatg gaagacaaat ggcaaattctt
 5700
 gaaatagaat tggggcaatt accttttgat cctcaatact gattcacaat tgagttaa
 5760
 tagacaactg taagagaaaa atttatgctt tgtataatgt ttggtattga aactaatgaa
 5820
 attaccaaga tgacaatgtc ttttcttttg tttctaagta tcagtttgat aactttatat
 5880
 tattcctcag aagcattagt taaaagtcta ctaacctgca ttttcctgta gtttagcttc
 5940
 gttgaatttt ttttgacact ggaaatgttc aactgtagtt ttattaagga agccaggcat
 6000
 gcaacagatt ttgtgcatga aatgagactt cctttcagtg taagagctta aagcaagctc
 6060
 agtcatacat gacaaagtgt aattaacact gatgtttgtg ttaaatttgc agcagagctt
 6120
 gagaaaagta cattgttctg gaatttcac attacattt tataatctta cactcacttc
 6180
 ttgtcttttt gtgggttcaa gagccctctg acttgtgaag aatttgctgc cctcttaaga
 6240
 gcttgctgac ttgttttctt gtgaaatttt ttgcacatct gaatatcgtg gaagaaacaa
 6300
 taaaactaca ccatgaggaa aact
 6324

<210> 5322

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5322

Met	Leu	Lys	Arg	Glu	Leu	Glu	Arg	Glu	Arg	Leu	Val	Thr	Thr	Ala	Leu
1				5					10					15	
Arg	Gly	Glu	Leu	Gln	Gln	Leu	Ser	Gly	Ser	Gln	Leu	His	Gly	Lys	Ser
			20					25				30			
Asp	Ser	Pro	Asn	Val	Tyr	Thr	Glu	Lys	Lys	Glu	Ile	Ala	Ile	Leu	Arg
		35					40					45			
Glu	Arg	Leu	Thr	Glu	Leu	Glu	Arg	Lys	Leu	Thr	Phe	Glu	Gln	Gln	Arg
		50				55					60				
Ser	Asp	Leu	Trp	Glu	Arg	Leu	Tyr	Val	Glu	Ala	Lys	Asp	Gln	Asn	Gly
65				70					75					80	
Lys	Gln	Gly	Thr	Asp	Gly	Lys	Lys	Lys	Gly	Gly	Arg	Gly	Ser	His	Arg
			85						90					95	
Ala	Lys	Asn	Lys	Ser	Lys	Glu	Thr	Phe	Leu	Gly	Ser	Val	Lys	Glu	Thr
			100					105					110		
Phe	Asp	Ala	Met	Lys	Asn	Ser	Thr	Lys	Glu	Phe	Val	Arg	His	His	Lys
		115					120					125			
Glu	Lys	Ile	Lys	Gln	Ala	Lys	Glu	Ala	Val	Lys	Glu	Asn	Leu	Lys	Lys
		130				135					140				
Phe	Ser	Asp	Ser	Val	Lys	Ser	Thr	Phe	Arg	His	Phe	Lys	Asp	Thr	Thr
145					150				155					160	
Lys	Asn	Ile	Phe	Asp	Glu	Lys	Gly	Asn	Lys	Arg	Phe	Gly	Ala	Thr	Lys
			165					170						175	
Glu	Ala	Ala	Glu	Lys	Pro	Arg	Thr	Val	Phe	Ser	Asp	Tyr	Leu	His	Pro

tgggatggag cagaactgca ttatttcatt acattactca gaacaggcat ataattgaaa
4080
acttatgaat tatttttttt ttaattatth gagatggaat cttgctttgt cagccaggct
4140
ggagtgcagt gacacgatct cagctcactg caacctctgt ctctctgggt caggtgatcc
4200
tcctccctag tctcccaagt agctgggact atagggcacg tgccaccaca cccggcta
4260
tttcatatth ttagtagaga tggggtttca ccatgttggc caggctgttc ttgaaatcct
4320
gacctcaagt gatccacaca tgtctacctc ccaaagtgtc gggattacag tcgtgagcca
4380
ctgtaccccg cctaaaactg atgaattatt tctgaaatth tctatttaac attttcagac
4440
cacagttgac cacaggtaac ggaaacctca atcacagaaa gttaaagccgt ggatacgggtg
4500
ggactaatgt attggttagca gcctagagga ttgatgggaa aggtatgaag ctagaagggtg
4560
gtcaatataa tacagacatg agctgatgaa catctaaact gggactatac tagtaggaga
4620
ggaaaggaaa aaacatttgg aaaatagtaa cattgatatt tcttgtgaag gagaagtaga
4680
aagtaacagt gacttctaga tttctgggtt gggatcatctg ttgttggata gtagtaccac
4740
tgagataggg aattcaagggt ttggggcaag ggtaattgga gatgagaatt gtgtttggag
4800
gtaactactg acattcaagt ggagaggggt agttggcagt tagttctatg gtcactctct
4860
ttgccgagac tgtatattta tcagactcct gggagaacac caacatccat ggggttgtag
4920
ggaaggctaa ggacaagagt ggggagtggg accttgaaaa tccaaaagcc atctcaagta
4980
aaaggaataa atgtgtcatg ctttttaaaa agttgatgtg cggaaaatgt tttcttggct
5040
tggaaactgg gcggccaggg gatgacagta tggacttcca gtgaagtagt gacggaagcc
5100
tgatcataga cattaaggaa agcgggtgtg gtgttgtgag cttttgtctg aagaaaaagt
5160
tgagactttt gttttgcttt gtttgtgaga gatgtgtatg tatttctgct gagtataaaa
5220
gccagcgggg agggactgat ttttatagga aaggaggaaa aataatggaa acacatctca
5280
ttattttatt gtcacatttc ttttcttctg tatcttttga gtgtttccct tttttgccag
5340
tagagttatt gtctattttt tctttctata ggacaaaaaa actaatacag actcctttat
5400
ttttatatgg atatactagg attgtaattc agatatttaa tatcttttat cagtgttcag
5460
atcatagatt aatggagaaa acatttaaaa ttgttttaaa tttaaataca ttgaactcta
5520
acatagatga aaaaatgtgt tactgctttc agtcgacctg ataaaaagca acgtatggta
5580
aatattgaaa actccaggca tcgaaaacaa gagcagaagc accttcagcc acagccttat
5640

tccctccat atggaccag gtcggtttac ataaaaccgt gtcattacag tagtttgtaa
2460
cattttaga ttgatagca tttttatgat ttgatgagtt tcttgtaagg ttaccgttcc
2520
taagagttgt gctttatggc cactgagaga attcagaata aattgaaaga tggagtctaa
2580
aaattattag ctgttacaaa tggaacattt cattataacg tgatcacttt gacttgagca
2640
aatggtttaa tttttatctt aaaaatcagt taagaatata taaaatccta ctttgccaa
2700
gtttgtttct tttcattata gtttatatga aaagatcacc ttaagtgaat ttattttcct
2760
ttaatctttt atgtatttat tcaacttttg aagctaggaa tgagcaacac aaattttact
2820
ctgaagtcag aagagctcat atataataat tctaattgtc cacctatttt cacttgcca
2880
ttccatgtac cagcttagtt atgatactta gtcacataat tatctttgat aaaggtagag
2940
gcacaaagag gcaaactaag caagtcaaat tctaattgtg gtacttcata ataatttttt
3000
atccattttc atctttatat tctgtaacat gaaacttacc taatcttcaa atgttagctt
3060
cattttttac ctttgaaata cttaatcttt ctgaataaat ataattgtgc tataaaataa
3120
tgagactgat tctggtgtct ttagttatta agctggtatc tagtcctata atgaacaaag
3180
gtgaagctgc cttgaggaga caagtgaata atttttgctt caaaggagct cacaagctaa
3240
gtaaataaat gaaattaagg tatggggcat ggtggcctca ggctgtctgg aggtgtttgg
3300
aaaggcttct tgagtgaggt ggcctttgaa ctgaacttag tttttaagt agcttttga
3360
agagaaatga ggatttgcta tgcagacagg gaagggaatt tcacttaaaa ggaaggctat
3420
ttggagatgt gaagatacac tgctttaagg aagcagggtg gagctggagg ataagagatg
3480
cagaccatga agggcccat tttatgctaa aggttttgtc ctgtaggaca tggagaactt
3540
ctgaagaatt ttcaaggcgg gtgggataag atttatattgt atttttagatt acagtagtcc
3600
ccccttatct tcaggatata tgtccaaga ccccgagtg atgctggaaa ccagggatag
3660
aacataattc tatatatact atgcatgaat ttctttttcc ttctttacaa tctcacacat
3720
aggtttgttc ttactataga tcttaccat ctctcactt tttatttctc ttgagaacct
3780
tcacccttcc acttaaaagg ggcgctttat agcttctctt tggcatatcc aaatgccagc
3840
atcactgttg tttttgggg tcattattaa gttacttaat catccttaat ccttatctta
3900
gggatacttg aacacaaaca ctgtggtagg ataacagtat atctgattaa cagactgcta
3960
ctaggtgatt aatgggtggg tagtgtaaat acacaagaaa aggatgattc acatcccatg
4020

caagaaactg aaccttctaa ggagttgagt aaacgtcagt tcagtagtgg tctcaataag
840
tgtgttatac ttgctttggt gattgcaatc agcatgggat ttggccattt ctatggcaca
900
attcagattc agaagcgtca acagttagtc agaaagatac atgaagatga attgaatgat
960
atgaaggatt atctttccca gtgtcaacag gaacaagaat cttttataga ttataagtca
1020
ttgaaagaaa atcttgcaag gtgttggaac cttactgaag cagagaagat gtcctttgaa
1080
actcagaaaa cgaaccttgc tacagaaaat cagtatttaa gagtatccct ggagaaggaa
1140
gaaaaagcct tatcctcatt acaggaagag ttaaacaac taagagaaca gattagaata
1200
ttggaagata aagggaacag tactgaatta gttaaagaaa atcagaaact taagcagcat
1260
ttggaagagg aaaagcagaa aaaacacagc tttcttagtc aaaggagagac tctgttgaca
1320
gaagcaaaga tgctaaagag agaactggag agagaacgac tagtaactac ggctttaagg
1380
ggggaactcc agcagttaag tggtagtcag ttacatggca agtcagattc tccaatgta
1440
tatactgaaa aaaaggaaat agcaatctta cgggaaagac tcaactgagct ggaacggaag
1500
ctaacttcg aacagcagcg ttctgatttg tgggaaagat tgtatgttga ggcaaagat
1560
caaatggaa aacaaggaa acatggaaaa aagaaagggg gcagaggaag ccacagggct
1620
aaaaataagt caaaggaaac atttttgggt tcagttaagg aaacatttga tgccatgaag
1680
aattctacca aggagtttgt aaggcatcat aaagagaaaa ttaagcaggc taaagaagct
1740
gtgaaggaaa atctgaaaaa attctcagat tcagttaaat ccactttcag acactttaaa
1800
gataccacca agaatatctt tgatgaaaag ggtaataaaa gatttgggtgc tacaaaagaa
1860
gcagctgaaa aaccaagaac agtttttagt gactatttac atccacagta taaggcacct
1920
acagaaaacc atcataatag gccctactat gcaaatgat ggaaggaaga aaagccagtt
1980
cactttaag aattcagaaa aaatacaaat tcaaagaaat gcagtcctgg gcatgattgt
2040
agagaaaatt ctcatcttt cagaaaggct tgttctggtg tatttgattg tgctcaacaa
2100
gagtcctga gcccttttaa cacagtgggt aatcctataa ggatggatga atttagacag
2160
ataattcaaa ggtacatgtt aaaagaactg gatacttttt gtcactggaa cgaacttgat
2220
cagttcatca ataagttttt cctaaacggg gtcttttatac atgacagaa gctcttcact
2280
gactttgtta atgatgttaa agattatctt agaaacatga aggaatatga agtagataat
2340
gatggagtat ttgagaagtt ggatgaatat atatatagac acttctttgg tcacactttt
2400

agaatctggt gctctctggt gagagagatc t
4231

<210> 5320

<211> 96

<212> PRT

<213> Homo sapiens

<400> 5320

Met	Cys	Arg	Val	Thr	Pro	Leu	Ala	Leu	Gly	Val	Ser	Thr	Glu	Pro	Ser
1				5					10					15	
Pro	Ala	Ser	Leu	Val	Leu	Asn	Phe	Val	Leu	Phe	Cys	Phe	Val	Leu	Arg
			20					25					30		
Arg	Ser	Leu	Ala	Leu	Xaa	Thr	Gln	Ala	Gly	Val	Leu	Trp	Leu	Asp	Leu
		35					40					45			
Gly	Ser	Leu	Gln	Pro	Pro	Pro	Arg	Phe	Lys	Gln	Phe	Ser	Cys	Pro	
	50				55					60					
Ser	Leu	Pro	Ser	Ser	Trp	Asp	Tyr	Arg	Cys	Met	Pro	Pro	Trp	Leu	Ala
65				70					75					80	
Asn	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Ser	Pro	Tyr	Trp	Ser	Gly
			85					90						95	

<210> 5321

<211> 6324

<212> DNA

<213> Homo sapiens

<400> 5321

ntccggaggc ccgagccgac cctggggcgt ccggtccggt ggtcttacag cctccaaacc
60
ccgagtgccta taccgaactg cgcgcccaagg gtgggagagc tgacggcctg ggccaccctt
120
cttccttcac tgggcaggct ttgaggtgct tgcggtctg gactgatgaa aatccatatg
180
acctgaaaga tgtctgaaaa ttccagtgcac agtgattcat cttgtggttg gactgtcatc
240
agtcatgagg ggtcagatat agaaatgttg aattctgtga cccccactga cagctgtgag
300
cccgccccag aatgttcacc tttagagcaa gaggagcttc aagcattgca gatagagcga
360
ggagaaagca gccaaaatgg cacagtgcct atggaagaaa ctgcttatcc agctttggag
420
gaaaccagct caacaattga ggcagaggaa caaaagatac ccgaagacag tatctatatt
480
ggaactgcca gtgatgattc tgatattgtt acccttgagc cacctaagtt agaagaaatt
540
ggaaatcaag aagttgtcat tgttgaagaa gcacagagtt cagaagactt taacatgggc
600
tcttcctcta gcagccagta tactttctgt cagccagaaa ctgtattttc atctcagcct
660
agtgatgatg aatcaagtag tgatgaaacc agtaatcagc ccagtcctgc ctttagacga
720
cgccgtgcta ggaagaagac cgtttctgct tcagaatctg aagaccggct agttgctgaa
780

ggggcagtgg cttccccggc agcagcccca tgatggctga atccgaaatc ctcgatgggt
2640
ccagcttgat gtctttgcag ctgcacctat gggaagaagt agtcctctct tccttctcct
2700
cttcagcttt ttaaaaacag tcctcagagg atccatgac cccagcactg tcccacctc
2760
cacaaggcc cacaggcatg cctgtactct ctttcattaa ggtcttgaag tcaggctgcc
2820
ccctccccag cccccagttc tctccccacc ccctcacccc acccggggct cactcagcct
2880
ggcagaggaa gaaggaaggc agacatctcc gcagccactc ctgggccttt tatgtgccga
2940
gttaccctac ttgccttggg cgtgtccact gagccttccc cagccagtct tgttctcaat
3000
tttgttttgt tttgttttgt tttgagacgg agtcttgctc tgntcaccca ggctggagt
3060
ctatggctcg atcttggtc actgcaacct ccacctcca ggttcaagca attctcttg
3120
cccagcctcc cgagtagctg ggattacagg tgcattgccac catggctggc taattttt
3180
atttttagta gagatggggg ttcacatat tggtcaggct gatctggaac tcctgacctc
3240
aggtgatcca cctgcctcag cctcccaaag tgctgggatt acaggcgtga gcaatcgtgc
3300
ccagccttgt tcttaatttt gtatcatcca gtcacgcta atattacacg caccttctca
3360
cttaatctc acgacaagcc tgtgaggcag atgctcattg tcccatctt gatgaaactt
3420
gagtctcagg gaagtgaagt gacttgccca gggtcactca ggtagagttg agattcaaac
3480
ccacatgtgg ctccaaagtc tgcattctgga tttgggggtg ttttttggca tggcacctc
3540
acctctctcc ctgcctgttt tccccaaagt ggaaaggaag gcctttcaaa ccagagtgc
3600
tactccccct ctgacctcca gaccagatgg ggcattgagc agccagctca gccaggctcc
3660
ctgtgtctct ggaggaagtg tccccatccc ccatgccctt tatggggagg gagggcgtct
3720
gatgctctct ctctgcctcc cccccatcct gtcaggcaca ggtgacgggg gcagcccatg
3780
cgagcccttc tcctgtctgt ctgggagggc cagttccaca ttgagccagc ctggtcccat
3840
ggaaaatgat ggctgggct ttctgaggcc ttatctgatg cctctgcagt tcatgtcccc
3900
caccaggcct cgaggctcag ggtgggagag ggccccgggc tgccctgtca ctcctctaac
3960
acttccccct cctgtcccca acatgccctg taataaaatt agagaagact aactagagt
4020
gttctaagtg cttttccttt gagtggcatg ttgctcagct cgtccttcc atgggggtgg
4080
tccctcttgg ggcagagttg agctggaatg ctttcaggta ctatcttacc tatcgaaggc
4140
ttgagtgact tgcccaaat aagttttacg atagaacaag tggtaggact tactgtttt
4200

ctgggaggag gctgcccggc gcctggaggt ggccatgtac cccttcaaga aggtctccta
1020
cttgccgttc actgaggcct tcgaccgagc caaggctgag aacaagctgg tgcaactcaat
1080
cctgctgtgg ggggccctgg atgaccagtc ctgctgaggt tcagggcgga ctctccggga
1140
gactgtcctg gaaagtctgc ccacctcac cctgctcaac gagagcttca tcagcacctg
1200
gtccctggtg aaggagctgg aggaactgca gaacaaacag gagaactcgt cccaccagaa
1260
gctggctggc ctgcacctgg agaagtacag cttccccgtg gagatgatga tctgcctgcc
1320
caatggcacc gtggtccatc acatcaatgc caactacttc ttggacatca cctccgtgaa
1380
gcccaggaa atcgagagca atctcttcag cttctcatcc accttgaag acccgccac
1440
ggccacctac atgcagttcc tgaaggaggg actccggcgt ggccctgccc tctccagcc
1500
ctagagtgcc tggacgggat ctgatgcaca ggccccacg cctcagagcc agagtgggcc
1560
tcagccatt tcagactgca gatgccgcc actccaccc cactcctagg ctgccttgga
1620
gggtacaaga tccactgagg gtggccacca cagccttggc tccatggtgg cgggtagaca
1680
agggatgcct gggtgactg ggcagaggaa cctctagctc tgactgtcac tcggctctcc
1740
ctacccattt ggctctgga gctgcttggc cccccagat cagggcctgg gtgaactccc
1800
tggacctttc ctageccagc gcacagtcta ggcccttgtg ggggtgaagaa tggaggagg
1860
agcaggctag gaagacgggg ccaccacct ctccttgctt tcagccctc ccacaggaaa
1920
catcaagaag cccagccag gaggggccag gctgccagg cggctcccct gtttatctag
1980
agccttcgtt cctggccata ccccgactg cctcctgtg cctgatgtcc ccagctgggg
2040
tcagtctcaa caggagccag tctctggag cctctgggca gaacctcca tcagagtgga
2100
aatcagacgg gacccctgc agcttccctg accacgccac tgaccagcta tctggggaag
2160
tttactgtga aggggtttct gccttagca atggggttca ctaaggggt tcccaggcc
2220
caggccaag gactccac cgctacctt agcacagggt ctctgcagga ctgaggagc
2280
cagcgtcct gccgccctc ttgccctca gaccttgcac ccacagaagc acaaccagc
2340
caaacaccac agccttctcc agagccggca ctgtccggc aaccaggggt gcccaggct
2400
agctcttcta cctctggggc accacggact ccccttgcc actcttggga ctttggcca
2460
cgtcctgagc cactgaccac ggccagtctc tcttttata tgtgcagaaa agtggtttta
2520
cacaaacttt ctcatggttt gtaggtattt tttataacc ccagtgtga ggagaaagga
2580

4488

485 490 495
 Ala Leu Pro Pro Glu Pro Pro Pro Gly Pro Glu Val Lys Gly Gly Ser
 500 505 510
 Cys Gly Leu Glu His Glu Leu Ser Cys Ser Lys Asn Glu Lys Glu Leu
 515 520 525
 Glu Glu Leu Leu Leu Glu Ala Ser Gln Glu Ser Gly Gln Glu Thr Leu
 530 535 540

 <210> 5317
 <211> 889
 <212> DNA
 <213> Homo sapiens

 <400> 5317
 ccaaggctca ggccggggcc aagagccgac ccaagaagag agagggcgctc cacctcccca
 60
 ccaccaagga gctggccaag cggcagcgcc tgccctccgt ggaaaaccgg ccaaagatct
 120
 cagccttctt gcccgcccgg cagctctgga agtggtcggg gaatcccaca cagcggcggtg
 180
 gcatgaaggg gaaggcccgg aagctgttct acaaggccat cgtgcggggc gaggagaccc
 240
 tgcgtgtcgg ggactgtgcc gtcttctgtt cagctgggag gcccaacctc ccctacatcg
 300
 gccgcatcga gagcatgtgg gagtcgtggg gcagcaacat ggtggtcaag gtcaagtggg
 360
 tctaccaccc tgaggagacc aagctgggca agcagttcca ccagggccag cactgggacc
 420
 agaagtccag ccgcagcctc ccggcggccc tgcgggtctc cagccagagg aaggacttca
 480
 tggagcgcgc gctataccag tcctcgcatt tggacgaaaa tgacgtgcag acggtgtcgc
 540
 acaagtgcct ggtggtgggc ctggagcagt atgagcagat gctgaagacc aagaagtacc
 600
 aggacagcga gggcctgtac tacctcgcgg gcacctacga gccaccacag ggcatgatct
 660
 tctccacgga cggcgtgccc gtgctctgct gagcccgccg ggccctgcgg gccacctgt
 720
 gccccgaggg cggcccaggg acccatctcc atcactgcca tggcgcggag accacgtgcg
 780
 ttgtgtgcat gcgagcgtc ctgcaggcgt gtgcatgggg ccagggtggac gcccagga
 840
 agtgtgagtg tgtacatgtg tgtgcccgtg tgcattgcac tgtgtgcac
 889

<210> 5318
 <211> 132
 <212> PRT
 <213> Homo sapiens

<400> 5318
 Arg Gly Arg Pro Gly Ser Cys Ser Thr Arg Pro Ser Cys Gly Ala Arg
 1 5 10 15
 Arg Pro Cys Val Ser Gly Thr Val Pro Ser Ser Cys Gln Leu Gly Gly

4486

acactgtcgc acactcagag cctggagacg ctgaacctgg gccacaaccc catcgggaaac
 1200
 gaggggtgtgc ggcacctcaa gaacgggctc atcagcaacc gcagcgtgct gcgcctcggg
 1260
 ctggcctcca ccaagctcac gtgcgagggc gcggtggcgg tggcggagtt catcgctgag
 1320
 agcccccgcc tcctgagact ggaccttcgg gagaacgaga tcaagacagg cgggctcatg
 1380
 gcactgtcgt tggccctcaa ggtgaaccac tactgtgtgc gcctggacct cgacctgaa
 1440
 cccaagaaag aggcggtgaa gagcttcac gagacgcaga aggcgctgct ggccgagatc
 1500
 cagaacggct gcaagcgcaa cttggtgtgt gcgcgggaga gggaggagaa ggagcagccg
 1560
 ccacagctgt cggcctccat gcctgagacc accgccaccg agccccagcc cgacgacgag
 1620
 cccgccgctg ggggtgcagaa cggggccccc agccccgcac ccagcccga ctcagactca
 1680
 gactcggact cggatgggga ggaagaggag gaagaggaag gggagaggga cgagaccccc
 1740
 tccggggcca ttgacaccgg ggacacaggg tcctctgagc ctcagccacc accggagccg
 1800
 cctcgggtcag ggccaccact gcccaacggc ctgaagcccg agttcgccct ggcactgccc
 1860
 cctgagccgc ccccggggcc tgaggtcaag gggggcagct gcggcctgga gcacgaactg
 1920
 agctgtcca agaacgagaa ggagctcgag gagctgcttc tggaagccag tcaggaatcc
 1980
 gggcaggaga cactgtgaca ctttaggtga ggccaggccc ggggcccaca gactcggga
 2040
 ggagctgaga gagcctctgg ctctgacagt ctctcccca atctctctc cccaagtcc
 2100
 ctttttcgg tcggtctgag atgagctgag gccagagcca tgagaatctg ctcacctcc
 2160
 cccagcctt cctgaggccc aggatgccag ggggtggggc cattctgggg cccccctccc
 2220
 cccacagcaa cactacaagg ggtgcaggag ctacaggag tggccctccg cgcgtgactc
 2280
 aagcattct atttatga
 2298

<210> 5316

<211> 544

<212> PRT

<213> Homo sapiens

<400> 5316

Gln	Asn	Val	Thr	Val	Asp	Glu	Val	Ile	Gly	Ala	Tyr	Lys	Gln	Ala	Cys
1				5					10					15	
Gln	Lys	Leu	Asn	Cys	Arg	Gln	Ile	Pro	Lys	Leu	Leu	Arg	Gln	Leu	Gln
			20					25					30		
Glu	Phe	Thr	Asp	Leu	Gly	His	Arg	Leu	Asp	Cys	Leu	Asp	Leu	Lys	Gly
			35				40					45			
Glu	Lys	Leu	Asp	Tyr	Lys	Thr	Cys	Glu	Ala	Leu	Glu	Glu	Val	Phe	Lys

<400> 5315
ngctcccggc ggcgacgact acgaccacta ggagagcgga cggaggcggc gcctgaagcg
60
gcggcgggacg catgccccgg gacggcgggc ggaccgag agacaaattc ggggcccggg
120
gcatgtcccc gggcctccgt gaagggggcg gcggcggtta tggagatcgc gccgcaggag
180
gcgcgcggcg tgccgggcg gcgacggcgac attgaagagg cccagctga ggccgggtct
240
cccagccccg cgtcgcccc cgccgatggg cgctcaagg ctgcagccaa gcgcgtcaca
300
ttcccgctcg acgaggatat cgtgtctgga gcagtggagc ccaaagacct ctggagacat
360
gcccagaatg tgaccgtgga cgaggctatc ggcgccata agcaggcctg ccagaagctg
420
aactgcaggc agatcccca gctcctcagg cagctgcagg aattcacaga cctcgggcac
480
cgctcgact gtctggacct gaaaggtag aagcttgact acaagacctg tgaggccctg
540
gaagaggtct tcaagaggct gcagttcaag gtcgtggacc tggagcagac aaacctggat
600
gaagatggtg cctcggccct ctctgacatg atcgagtact acgagtcggc caccacctc
660
aacatctcct tcaacaagca catcggcacc cggggctggc aggcggccgc ccacatgatg
720
cgcaagacga gctgcctgca gtatctggac gcccgcaaca cgccctgct ggaccactcg
780
gcgcccctcg tggcccgctg cctgcgcac cgcagcagcc tggcagtgtc gcaattggag
840
aacgccagcc tgctggggcg gccctcatg ctgctcgca cgccctgaa gatgaacatg
900
aacctgcggg agctgtacct ggcggaac aagctcaacg gcctgcagga ctcggcccag
960
ctgggtaacc tgctcaagtt caactgctcc ctgcagatcc tggacctcg gaacaaccac
1020
gtgctagact cgggtctggc ctacatctgc gagggcctca aggagcagag gaaggggctg
1080
gtgacctgg tgctgtggaa caaccagctc acgcacacag gcatggcctt cctgggcatg
1140

```

      1           5           10           15
Cys Thr Gly Ser Leu His Phe Val His Gln Ala Tyr Leu Gln Gln Trp
      20           25           30
Ile Lys Ser Ser Asp Thr Arg Cys Cys Glu Leu Cys Lys Tyr Glu Phe
      35           40           45
Ile Met Glu Thr Lys Leu Lys Pro Leu Arg Lys Trp Glu Lys Leu Gln
      50           55           60
Met Thr Ser Ser Glu Arg Arg Lys Ile Met Cys Ser Val Thr Phe His
      65           70           75           80
Val Ile Ala Ile Thr Cys Val Val Trp Ser Leu Tyr Val Leu Ile Asp
      85           90           95
Arg Pro Ala Glu Glu Ile Lys Gln Gly Gln Ala Thr Gly Ile Leu Glu
      100          105          110
Trp Pro Phe Trp Thr Lys Leu Val Val Val Ala Ile Gly Phe Thr Arg
      115          120          125
Gly Leu Leu Phe Met Tyr Val Gln Cys Lys Val Tyr Val Gln Leu Trp
      130          135          140
Lys Arg Leu Lys Ala Tyr Asn Arg Val Ile Tyr Val Gln Asn Cys Pro
      145          150          155          160
Glu Thr Ser Lys Lys Asn Ile Phe Glu Lys Ser Pro Leu Thr Glu Pro
      165          170          175
Asn Phe Glu Asn Lys His Gly Tyr Gly Ile Cys His Ser Asp
      180          185          190

```

<210> 5313

<211> 322

<212> DNA

<213> Homo sapiens

<400> 5313

```

cgggggccgcc gagaggaaga ggggtgacaag cgcagcggtg cccccagac tcgggtcctg
60
aaaggcgctca tgcgagtagg catcctggcg aaaggcctcc tctgctggtg ggacaggaac
120
gtgcgcctcg ctctgctctg ctccgagaag cccacgcaca gcctgctgcg gaggatcgcc
180
cagcagctgc cccggcaaca caggcaattc cacgttgtgt gcgactggcc tgtgcatatg
240
gaggtgttca gtgacctggc cctggacact cctgctaaca ggacacacac atactctctt
300
acacacatac atgtccacac ac
322

```

<210> 5314

<211> 107

<212> PRT

<213> Homo sapiens

<400> 5314

```

Arg Gly Arg Arg Glu Glu Glu Gly Asp Lys Arg Ser Val Ala Pro Gln
1           5           10           15
Thr Arg Val Leu Lys Gly Val Met Arg Val Gly Ile Leu Ala Lys Gly
20          25          30
Leu Leu Leu Arg Gly Asp Arg Asn Val Arg Leu Ala Leu Leu Cys Ser

```

210	215	220
Val Asp Gly Gln Leu Thr Ser Pro Ala Thr Pro Ser Pro Asp Ala Ser		
225	230	235
Thr Ser Leu Glu Asp Ser Phe Ala His Leu Gln Leu Ser Gly Asp Asn		240
	245	250
Thr Ala Glu Arg Ser His Arg Gly Glu Gly Glu Glu Asp His Glu Ser		255
	260	265
Pro Ser Ser Gly Arg Val Pro Ala Pro Asp Thr Ser Ile Glu Glu Thr		270
	275	280
Glu Ser Asp Ala Ser Ser Asp Ser Glu Asp Val Ser Ala Val Val Ala		285
	290	295
Gln His Ser Leu Thr Gln Gln Arg Leu Leu Val Ser Asn Ala Asn Gln		300
305	310	315
Thr Val Pro Asp Arg Ser Asp Arg Ser Gly Thr Asp Arg Ser Val Ala		320
	325	330
Gly Gly Gly Thr Val Ser Val Ser Val Arg Ser Arg Arg Pro Asp Gly		335
	340	345
Gln Cys Thr Val Thr Glu Val		350
	355	

<210> 5311

<211> 572

<212> DNA

<213> Homo sapiens

<400> 5311

tgccactgtg aaggagatga tgagagcccc ctgatcaccc cctgccactg cacaggaagc
 60
 ctccacttcg tgcaccaggc ctacctgcag cagtggatca agagctccga cacgcgctgc
 120
 tgcgagctct gcaagtatga gttcatcatg gagaccaagc tgaagccact gagaaaatgg
 180
 gagaagttgc agatgacgtc cagcgagcgc aggaagatca tgtgctcagt gacattccac
 240
 gtcattgccca tcacatgtgt ggtctggtcc ttgtatgtgc tcattgaccg tcctgctgag
 300
 gagatcaagc aggggcaggc aacaggaatc ctagaatggc ccttttggac taaattggtg
 360
 gttgtggcca tcggcttcac cagaggactt ctttttatgt atgttcagt taaagtgtat
 420
 gtgcaattgt ggaagagact caaggcctat aatagagtga tctatgttca aaactgtcca
 480
 gaaacaagca aaaagaatat ttttgaaaaa tctccactaa cagagcccaa ctttgaaaat
 540
 aaacatggat atggaatctg tcattccgac ac
 572

<210> 5312

<211> 190

<212> PRT

<213> Homo sapiens

<400> 5312

Cys His Cys Glu Gly Asp Asp Glu Ser Pro Leu Ile Thr Pro Cys His

gaaggataga ctcataatta aaatgtctaa catgtctctg ttgagaaatt tatttaatgt
 1560
 aaggaacttg ggtgttaata gttgagagct gtttagtaat aaccagttt tcttgaggtc
 1620
 tgtttacttt atacttttta aaaacttctg tagttctttt ggccagtgtg tttgtattat
 1680
 ctgtgcatta atggtcctca tctgactcct gcattgtgtc ttatttttct gcatggattg
 1740
 gcataagacc attactaaaa tttggcacct gtgagatggt tgatattatg aacaggaaac
 1800
 ataatttaat gtatgaatag atgtgaattt gggatttcaa aatagatgaa taacaactat
 1860
 tttatagtaa agttattgaa atggaaatga aaacagccag taacttatgt ttcagaatgt
 1920
 ttgtaacaca cttcatggtg ttcccatagg ctttgctgtc tagtcttata gtttgaggtt
 1980
 tttttggtct gcatttttct ttttgattac aaaatttata atttaataaa tactagagtt
 2040
 tatcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
 2078

<210> 5310

<211> 359

<212> PRT

<213> Homo sapiens

<400> 5310

Met	Met	Ala	Gly	Cys	Gly	Glu	Ile	Asp	His	Ser	Ile	Asn	Met	Leu	Pro
1			5					10						15	
Thr	Asn	Arg	Lys	Ala	Asn	Glu	Ser	Cys	Ser	Asn	Thr	Ala	Pro	Ser	Leu
			20					25					30		
Thr	Val	Pro	Glu	Cys	Ala	Ile	Cys	Leu	Gln	Thr	Cys	Val	His	Pro	Val
		35					40					45			
Ser	Leu	Pro	Cys	Lys	His	Val	Phe	Cys	Tyr	Leu	Cys	Val	Lys	Gly	Ala
		50				55					60				
Ser	Trp	Leu	Gly	Lys	Arg	Cys	Ala	Leu	Cys	Arg	Gln	Glu	Ile	Pro	Glu
65				70					75					80	
Asp	Phe	Leu	Asp	Lys	Pro	Thr	Leu	Leu	Ser	Pro	Glu	Glu	Leu	Lys	Ala
			85					90					95		
Ala	Ser	Arg	Gly	Asn	Gly	Glu	Tyr	Ala	Trp	Tyr	Tyr	Glu	Gly	Arg	Asn
			100					105					110		
Gly	Trp	Trp	Gln	Tyr	Asp	Glu	Arg	Thr	Ser	Arg	Glu	Leu	Glu	Asp	Ala
		115					120					125			
Phe	Ser	Lys	Gly	Lys	Lys	Asn	Thr	Glu	Met	Leu	Ile	Ala	Gly	Phe	Leu
		130				135					140				
Tyr	Val	Ala	Asp	Leu	Glu	Asn	Met	Val	Gln	Tyr	Arg	Arg	Asn	Glu	His
145				150					155					160	
Gly	Arg	Arg	Arg	Lys	Ile	Lys	Arg	Asp	Ile	Ile	Asp	Ile	Pro	Lys	Lys
			165					170					175		
Gly	Val	Ala	Gly	Leu	Arg	Leu	Asp	Cys	Asp	Ala	Asn	Thr	Val	Asn	Leu
		180					185					190			
Ala	Arg	Glu	Ser	Ser	Ala	Asp	Gly	Ala	Asp	Ser	Val	Ser	Ala	Gln	Ser
		195				200						205			
Gly	Ala	Ser	Val	Gln	Pro	Leu	Val	Ser	Ser	Val	Arg	Pro	Leu	Thr	Ser

<212> DNA

<213> Homo sapiens

<400> 5309

nncgcagctg tggccggaga ggtgggagtc ggagcgaggc cctctcgggg gagcagggtg
60
aacgccggcc actctaggat cctcactcgg ggagaggagg catagctcgc ggggtcaccc
120
tccacccgca acgtactccg ggtcggcctt gcgctcgggg cctgagaggg gcggcggcgg
180
ggtcaggggc cgcacaaaga atgaaccagc agtggagag aaaatactgt aagctggctg
240
actgctggtg aagaaaatgc tttatTTTTg tggcaggcat ctgtgggac tgtaatagaa
300
atgatggctg gctgtggtga aattgatcat tcaataaaca tgcttctac aaacaggaaa
360
gcgaacgagt cctgttctaa tactgcacct tctttaaccg tccctgaatg tgccatttgt
420
ctgcaaacat gtgttcatcc agtcagtctg ccctgtaagc acgttttctg ctatctatgt
480
gtaaaaggag cttcatggct tggaaagcgg tgtgctcttt gtcgacaaga aattcccag
540
gatttccttg acaagccaac cttgttgta ccagaagaac tcaaggcagc aagtagagga
600
aatggtgaat atgcatggta ttatgaagga agaaatgggt ggtggcagta cgatgagcgc
660
actagtagag agctggaaga tgctttttcc aaaggtaaaa agaactga aatgttaatt
720
gctggcttctc tgtatgtcgc tgatcttgaa aacatggttc aatataggag aatgaacat
780
ggacgtcgca ggaagattaa gcgagatata atagatatac caaagaaggg agtagctgga
840
cttaggctag actgtgatgc taataccgta aacctagcaa gagagagctc tgctgacgga
900
gcggacagtg tatcagcaca gagtggagct tctgttcagc ccctagtgtc ttctgtaagg
960
cccctaacat cagtagatgg tcagttaaca agccctgcaa caccatcccc tgatgcaagc
1020
acttctctgg aagactcttt tgctcattta caactcagtg gagacaacac agctgaaagg
1080
agtcataggg gagaaggaga agaagatcat gaatcacat cttcaggcag ggtaccagca
1140
ccagacacct ccattgaaga aactgaatca gatgccagta gtgatagtga ggatgtatct
1200
gcagttgttg cacagcactc cttgacccaa cagagacttt tggtttctaa tgcaaaccag
1260
acagtacccg atcgatcaga tcgatcggga actgatcgat cagtagcagg ggggtggaaca
1320
gtgagtgtca gtgtcagatc tagaaggcct gatggacagt gcacagtaac tgaagtttaa
1380
ataaaaatgt cttcagctcc atgctcaagg ttgaaagggt tacctgtaaa tttctgccca
1440
cataacatta tactcatccc tagtagtgca ttttgggagt tgggggtggga aggggtatgg
1500

taagcgaatt ggaaatgctg agcttccata agtcagctga gttttaaagg taaacggtat
 720
 ggctgaagta gtaaagcacc tgaccacaaa acctcttgta aaaacagccc tgagtaggta
 780
 tttccagggc tccacaaaagt tgcttatggg aatcctgagc tgcttttcac catctcaaga
 840
 agcctaagaa gttatatatt taatcaggta gacaaaacag ttcaaagcat aagggtccatg
 900
 gtggtggaag atggatgcaa gtgattctaa gtttgtggat ttgtggatag cagagggatc
 960
 gggacctctt ggaggaaccc tgggtaccaa gctcccaggc ccttcctcta tcattggatgc
 1020
 tgggtgactt tgggaagtca ccacctcttc ccaagcctgt ttcccatatc acagatgtgg
 1080
 ggccatggcc togatgatgg tctccacagg tctttccacc tctgtgagtc caagtcagg
 1140
 caatcagcaa ggacctatct ctgcctggg tcagctcctc agaaccaacc cccagcatct
 1200
 cttaaagcaaa agcctcacct caagggctgc tcagaagaga gcaccttcag catgagttgt
 1260
 tgctggaaga tctaataagc tgtgtttcct gggaagtggg gctttactta gccctgtgga
 1320
 caacttctct atgcatctgt gtgagcagat gatcattgta ttacctttta tcggtagtaa
 1380
 gcttggaataa ataatttaag aatacaatgg agaaatgtaa ataagtatct atgtaaat
 1440
 gtttaataa aactgaatgt atttaatgg ccatttatat gttcttttat gtaacatgta
 1500
 gtttaataaa gttcctgttt atgagagtca tgtttcatct cagcttcttc c
 1551

<210> 5308

<211> 112

<212> PRT

<213> Homo sapiens

<400> 5308

Met	Leu	Gly	Val	Gly	Ser	Glu	Glu	Leu	Thr	Gln	Gly	Arg	Asp	Gly	Ser
1				5					10					15	
Leu	Leu	Ile	Asp	Leu	Thr	Trp	Thr	His	Arg	Gly	Gly	Lys	Thr	Cys	Gly
			20					25					30		
Asp	His	His	Arg	Gly	His	Gly	Pro	Thr	Ser	Val	Ile	Trp	Glu	Thr	Gly
			35				40					45			
Leu	Gly	Arg	Gly	Gly	Asp	Phe	Pro	Lys	Ser	Pro	Ser	Ile	His	Asp	Arg
	50				55						60				
Gly	Arg	Ala	Trp	Glu	Leu	Gly	Thr	Gln	Gly	Ser	Ser	Lys	Arg	Ser	Arg
65				70					75					80	
Ser	Leu	Cys	Tyr	Pro	Gln	Ile	His	Lys	Leu	Arg	Ile	Thr	Cys	Ile	His
			85					90					95		
Phe	Pro	Pro	Pro	Trp	Thr	Leu	Cys	Phe	Glu	Leu	Phe	Cys	Leu	Pro	Asp
			100					105					110		

<210> 5309

<211> 2078

cgggggtcttt gttctcggct cccacagcag agccagggtga gggggggcct gccaggacta
 360
 gacagaagtg gggcggcctg aaccttgctt ccagccatgg ccagggggcca cggaacccgg
 420
 caggggtgtc tgaagccgcc ctgtcagctg gccgggtccaa gcctgtggct ggagctgggtg
 480
 tgtgtttatc taataaagtc ccacagggtgc ctcaaaaaa aaaaaaaaaa aaaaaaaaaa
 540
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 582

<210> 5306

<211> 62

<212> PRT

<213> Homo sapiens

<400> 5306

Met	Ala	Arg	Gly	His	Gly	Thr	Arg	Gln	Gly	Cys	Leu	Lys	Pro	Pro	Cys
1				5					10					15	
Gln	Leu	Ala	Gly	Pro	Ser	Leu	Trp	Leu	Glu	Leu	Val	Cys	Val	Tyr	Leu
		20						25				30			
Ile	Lys	Ser	His	Arg	Cys	Leu	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
		35				40					45				
Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
	50					55					60				

<210> 5307

<211> 1551

<212> DNA

<213> Homo sapiens

<400> 5307

cagggctggt tgacagtgtg cgtttttcca atcccatggt cctccattcg tgtgtctgtt
 60
 ataaaactga gtgaaggctg ctatgacctg tgttcactct ggttacaggg aggtgcaaac
 120
 cattctgtct cccagccttt cttctctctt tgtgtgtctc cagcacttcc ttcttttcta
 180
 acatggcctg gagagagtct ctctctcctt gtctctgtct cttaataata gtttttaacg
 240
 tggacatctc ttccttggtg cagtgggttt taaatactga gaagaaccaa gtcagggttt
 300
 ttaaagcaga ctaaaagcat gaaattgctt tcagaagaat gtatatcatc gggaaaagtt
 360
 cgggggcaga gtgggggaat caggctttat tcaaaagaaa cagttgaaaa catgggactt
 420
 tttctacca atgcccattt cagcactcct ctgagactaa ttgggaaacg gggaaattct
 480
 tggaattttt tttttaagaa acttttttgt gttttttta attttaggtc acttattagt
 540
 gaaacctcat tttagatctg acattggtag atagatggat ttaggcaa atgatgcgtt
 600
 tgtggggaat ccacgtggtt gacgttagaa cctcccttct gcagactggt gcctgtcacc
 660

<210> 5303
 <211> 334
 <212> DNA
 <213> Homo sapiens

<400> 5303
 cgtacgcacg ccactgacag ccgcccagca gaagtacaag aagggcgatg tggctctgcac
 60
 acccagcggg atacgaaaga agttcaacgg caagccgggg cgcccggctg ggctcacgag
 120
 atggctgcat gaaggagtca cagcggcgag gctactgtc acgccacctg tccatgcgaa
 180
 ccaaagagat ggaaggcctg gcagacagtg ggcctggcgg ggcgggccgg cccgcgccg
 240
 tggcagcccg tgagggcagc acggagtttg actgggggtga tgagacgtcg agggacagtg
 300
 gaggccagca gtgtggcgac tcgtggagac tcac
 334

<210> 5304
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 5304
 Met Trp Ser Ala His Pro Ala Glu Tyr Glu Arg Ser Ser Thr Ala Ser
 1 5 10 15
 Arg Gly Ala Arg Leu Gly Ser Arg Asp Gly Cys Met Lys Glu Ser Gln
 20 25 30
 Arg Arg Gly Tyr Cys Ser Arg His Leu Ser Met Arg Thr Lys Glu Met
 35 40 45
 Glu Gly Leu Ala Asp Ser Gly Pro Gly Gly Ala Gly Arg Pro Ala Ala
 50 55 60
 Val Ala Ala Arg Glu Gly Ser Thr Glu Phe Asp Trp Gly Asp Glu Thr
 65 70 75 80
 Ser Arg Asp Ser Gly Gln Gln Cys Gly Asp Ser Trp Arg Leu
 85 90 95

<210> 5305
 <211> 582
 <212> DNA
 <213> Homo sapiens

<400> 5305
 nttgccggcc cctgcacatt taggatatgc tcttgatgg ggagtgggtt gtgcccaggg
 60
 cctctgtccc ccaggatgtc ttgtggtggc ggtcgccgt tctgcccccc agggcacccc
 120
 ctgttgtagg cactggctag ggaggggcag gcctccttcc tgccccctga gacactcttg
 180
 ggagatgcat tttccgtctg gctcacaggg ggagggtag gctttgtacc ccagcccctg
 240
 cccaggccac tgtgaggggtg ggtgctggct gagcccctgg ggcagaagga gtggggcagg
 300

915 920 925
 Gln Leu Phe Val Gly Gly Ala Gly Gly Gln Gln Gly Phe Leu Gly Cys
 930 935 940
 Ile Arg Ser Leu Arg Met Asn Gly Val Thr Leu Asp Leu Glu Glu Arg
 945 950 955 960
 Ala Lys Val Thr Ser Gly Phe Ile Ser Gly Cys Ser Gly His Cys Thr
 965 970 975
 Ser Tyr Gly Thr Asn Cys Glu Asn Gly Gly Lys Cys Leu Glu Arg Tyr
 980 985 990
 His Gly Tyr Ser Cys Asp Cys Ser Asn Thr Ala Tyr Asp Gly Thr Phe
 995 1000 1005
 Cys Asn Lys Asp Val Gly Ala Phe Phe Glu Glu Gly Met Trp Leu Arg
 1010 1015 1020
 Tyr Asn Phe Gln Ala Pro Ala Thr Asn Ala Arg Asp Ser Ser Ser Arg
 1025 1030 1035 1040
 Val Asp Asn Ala Pro Asp Gln Gln Asn Ser His Pro Asp Leu Ala Gln
 1045 1050 1055
 Glu Glu Ile Arg Phe Ser Phe Ser Thr Thr Lys Ala Pro Cys Ile Leu
 1060 1065 1070
 Leu Tyr Ile Ser Ser Phe Thr Thr Asp Phe Leu Ala Val Leu Val Lys
 1075 1080 1085
 Pro Thr Gly Ser Leu Gln Ile Arg Tyr Asn Leu Gly Gly Thr Arg Glu
 1090 1095 1100
 Pro Tyr Asn Ile Asp Val Asp His Arg Asn Met Ala Asn Gly Gln Pro
 1105 1110 1115 1120
 His Ser Val Asn Ile Thr Arg His Glu Lys Thr Ile Phe Leu Lys Leu
 1125 1130 1135
 Asp His Tyr Pro Ser Val Ser Tyr His Leu Pro Ser Ser Ser Asp Thr
 1140 1145 1150
 Leu Phe Asn Ser Pro Lys Ser Leu Phe Leu Gly Lys Val Ile Glu Thr
 1155 1160 1165
 Gly Lys Ile Asp Gln Glu Ile His Lys Tyr Asn Thr Pro Gly Phe Thr
 1170 1175 1180
 Gly Cys Leu Ser Arg Val Gln Phe Asn Gln Ile Ala Pro Leu Lys Ala
 1185 1190 1195 1200
 Ala Leu Arg Gln Thr Asn Ala Ser Ala His Val His Ile Gln Gly Glu
 1205 1210 1215
 Leu Val Glu Ser Asn Cys Gly Ala Ser Pro Leu Thr Leu Ser Pro Met
 1220 1225 1230
 Ser Ser Ala Thr Asp Pro Trp His Leu Asp His Leu Asp Ser Ala Ser
 1235 1240 1245
 Ala Asp Phe Pro Tyr Asn Pro Gly Gln Gly Gln Ala Ile Arg Asn Gly
 1250 1255 1260
 Val Asn Arg Asn Ser Ala Ile Ile Gly Gly Val Ile Ala Val Val Ile
 1265 1270 1275 1280
 Phe Thr Ile Leu Cys Thr Leu Val Phe Leu Ile Arg Tyr Met Phe Arg
 1285 1290 1295
 His Lys Gly Thr Tyr His Thr Asn Glu Ala Lys Gly Ala Glu Ser Ala
 1300 1305 1310
 Glu Ser Ala Asp Ala Ala Ile Met Asn Asn Asp Pro Asn Phe Thr Glu
 1315 1320 1325
 Thr Ile Asp Glu Ser Lys Lys Glu Trp Leu Ile
 1330 1335

485 490 495
 Gln Val Lys Thr Gly Glu Lys Tyr Phe Phe Gly Gly Phe Leu Asn Gln
 500 505 510
 Met Asn Asn Ser Ser His Ser Val Leu Gln Pro Ser Phe Gln Gly Cys
 515 520 525
 Met Gln Leu Ile Gln Val Asp Asp Gln Leu Val Asn Leu Tyr Glu Val
 530 535 540
 Ala Gln Arg Lys Pro Gly Ser Phe Ala Asn Val Ser Ile Asp Met Cys
 545 550 555 560
 Ala Ile Ile Asp Arg Cys Val Pro Asn His Cys Glu His Gly Gly Lys
 565 570 575
 Cys Ser Gln Thr Trp Asp Ser Phe Lys Cys Thr Cys Asp Glu Thr Gly
 580 585 590
 Tyr Ser Gly Ala Thr Cys His Asn Ser Ile Tyr Glu Pro Ser Cys Glu
 595 600 605
 Ala Tyr Lys His Leu Gly Gln Thr Ser Asn Tyr Tyr Trp Ile Asp Pro
 610 615 620
 Asp Gly Ser Gly Pro Leu Gly Pro Leu Lys Val Tyr Cys Asn Met Thr
 625 630 635 640
 Glu Asp Lys Val Trp Thr Ile Val Ser His Asp Leu Gln Met Gln Thr
 645 650 655
 Pro Val Val Gly Tyr Asn Pro Glu Lys Tyr Ser Val Thr Gln Leu Val
 660 665 670
 Tyr Ser Ala Ser Met Asp Gln Ile Ser Ala Ile Thr Asp Ser Ala Glu
 675 680 685
 Tyr Cys Glu Gln Tyr Val Ser Tyr Phe Cys Lys Met Ser Arg Leu Leu
 690 695 700
 Asn Thr Pro Asp Gly Ser Pro Tyr Thr Trp Trp Val Gly Lys Ala Asn
 705 710 715 720
 Glu Lys His Tyr Tyr Trp Gly Gly Ser Gly Pro Gly Ile Gln Lys Cys
 725 730 735
 Ala Cys Gly Ile Glu Arg Asn Cys Thr Asp Pro Lys Tyr Tyr Cys Asn
 740 745 750
 Cys Asp Ala Asp Tyr Lys Gln Trp Arg Lys Asp Ala Gly Phe Leu Ser
 755 760 765
 Tyr Lys Asp His Leu Pro Val Ser Gln Val Val Val Gly Asp Thr Asp
 770 775 780
 Arg Gln Gly Ser Glu Ala Lys Leu Ser Val Gly Pro Leu Arg Cys Gln
 785 790 795 800
 Gly Asp Arg Asn Tyr Trp Asn Ala Ala Ser Phe Pro Asn Pro Ser Ser
 805 810 815
 Tyr Leu His Phe Ser Thr Phe Gln Gly Glu Thr Ser Ala Asp Ile Ser
 820 825 830
 Phe Tyr Phe Lys Thr Leu Thr Pro Trp Gly Val Phe Leu Glu Asn Met
 835 840 845
 Gly Lys Glu Asp Phe Ile Lys Leu Glu Leu Lys Ser Ala Thr Glu Val
 850 855 860
 Ser Phe Ser Phe Asp Val Gly Asn Gly Pro Val Glu Ile Val Val Arg
 865 870 875 880
 Ser Pro Thr Pro Leu Asn Asp Asp Gln Trp His Arg Val Thr Ala Glu
 885 890 895
 Arg Asn Val Lys Gln Ala Ser Leu Gln Val Asp Arg Leu Pro Gln Gln
 900 905 910
 Ile Arg Lys Ala Pro Thr Glu Gly His Thr Arg Leu Glu Leu Tyr Ser

50 55 60
 Ser Tyr Ser Pro Gly Tyr Ala Lys Ile Asn Lys Arg Gly Gly Ala Gly
 65 70 75 80
 Gly Trp Ser Pro Ser Asp Ser Asp His Tyr Gln Trp Leu Gln Val Asp
 85 90 95
 Phe Gly Asn Arg Lys Gln Ile Ser Ala Ile Ala Thr Gln Gly Arg Tyr
 100 105 110
 Ser Ser Ser Asp Trp Val Thr Gln Tyr Arg Met Leu Tyr Ser Asp Thr
 115 120 125
 Gly Arg Asn Trp Lys Pro Tyr His Gln Asp Gly Asn Ile Trp Ala Phe
 130 135 140
 Pro Gly Asn Ile Asn Ser Asp Gly Val Val Arg His Glu Leu Gln His
 145 150 155 160
 Pro Ile Ile Ala Arg Tyr Val Arg Ile Val Pro Leu Asp Trp Asn Gly
 165 170 175
 Glu Gly Arg Ile Gly Leu Arg Ile Glu Val Tyr Gly Cys Ser Tyr Trp
 180 185 190
 Ala Asp Val Ile Asn Phe Asp Gly His Val Val Leu Pro Tyr Arg Phe
 195 200 205
 Arg Asn Lys Lys Met Lys Thr Leu Lys Asp Val Ile Ala Leu Asn Phe
 210 215 220
 Lys Thr Ser Glu Ser Glu Gly Val Ile Leu His Gly Glu Gly Gln Gln
 225 230 235 240
 Gly Asp Tyr Ile Thr Leu Glu Leu Lys Lys Ala Lys Leu Val Leu Ser
 245 250 255
 Leu Asn Leu Gly Ser Asn Gln Leu Gly Pro Ile Tyr Gly His Thr Ser
 260 265 270
 Val Met Thr Gly Ser Leu Leu Asp Asp His His Trp His Ser Val Val
 275 280 285
 Ile Glu Arg Gln Gly Arg Ser Ile Asn Leu Thr Leu Asp Arg Ser Met
 290 295 300
 Gln His Phe Arg Thr Asn Gly Glu Phe Asp Tyr Leu Asp Leu Asp Tyr
 305 310 315 320
 Glu Ile Thr Phe Gly Gly Ile Pro Phe Ser Gly Lys Pro Ser Ser Ser
 325 330 335
 Ser Arg Lys Asn Phe Lys Gly Cys Met Glu Ser Ile Asn Tyr Asn Gly
 340 345 350
 Val Asn Ile Thr Asp Leu Ala Arg Arg Lys Lys Leu Glu Pro Ser Asn
 355 360 365
 Val Gly Asn Leu Ser Phe Ser Cys Val Glu Pro Tyr Thr Val Pro Val
 370 375 380
 Phe Phe Asn Ala Thr Ser Tyr Leu Glu Val Pro Gly Arg Leu Asn Gln
 385 390 395 400
 Asp Leu Phe Ser Val Ser Phe Gln Phe Arg Thr Trp Asn Pro Asn Gly
 405 410 415
 Leu Leu Val Phe Ser His Phe Ala Asp Asn Leu Gly Asn Val Glu Ile
 420 425 430
 Asp Leu Thr Glu Ser Lys Val Gly Val His Ile Asn Ile Thr Gln Thr
 435 440 445
 Lys Met Ser Gln Ile Asp Ile Ser Ser Gly Ser Gly Leu Asn Asp Gly
 450 455 460
 Gln Trp His Glu Val Arg Phe Leu Ala Lys Glu Asn Phe Ala Ile Leu
 465 470 475 480
 Thr Ile Asp Gly Asp Glu Ala Ser Ala Val Arg Thr Asn Ser Pro Leu

tgccatattt taaatcaact actccacgtg tttttccatc caatcacact gctgtgattc
 5580
 agggatcttt cttctaaaac ggacacattt gaacctcagg ttcacacaa acctgggtacc
 5640
 tggtgcttcc cagaggatgg agaagtgtag ttaatcacac ctcttagttt aatctgaaat
 5700
 cttgaccagc ttatttaaca aataaatacc tcattgatta tatttaaaag taatacactt
 5760
 cctgtaaaca aatggggaca atgcatccaa aaaatctttt taaacagatt acacaaaaat
 5820
 tatttccaga aaggctacca tttatcatca ttatatttca agcctcttat acttaataag
 5880
 cactttctaa aaagtcttga gatccaccca ttctgaggaa ttcaatatga tcactttttc
 5940
 cttctttgcc tgggagaggt taagaggagg tttcgaaggt atagatgcta ttgttctgat
 6000
 ggccccgctg aataaaatgg aaattctagt ttgttagaat tatgcattct tttcaagat
 6060
 tctcagtgtg cctaacttat tggagcacat cagtttcttg ggtaatggaa aacattacct
 6120
 agagttgcca gtggcacatt acaccagtac agagcacatt ccaaaggaga cattggacca
 6180
 gttaattccc atacaagtca aggtaacaga acaaaaggga atcctgatgc ctttttacca
 6240
 ttgctgggtg agctcaggca ctgtcatgga cacccttaat tttaaaagg tttaatcatt
 6300
 cttctataaa atacatttaa aatggaaaaa tacttaatat cactaaatat cagaacaatg
 6360
 taacatttac aaatgacata ttgaaagcaa aggctgtttt atttagccaa gatgattacc
 6420
 attaggagtt acttttatga ttgttgaaag caaattttta acatgatgtt ttagaagtgt
 6480
 ttctgatttt taaacctggt ttacaggtat tacttctgca cttaccaa atgcccagat
 6540
 ggaaatttat tatttcttgc aattcccgtg atagctctgt tctttatgca ttgtctcaac
 6600
 actttccctt ttttcccaa atgagtagag aattaaagcc acccaaaaca gcttctgcta
 6660
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 6712

<210> 5302

<211> 1339

<212> PRT

<213> Homo sapiens

<400> 5302

Ala	Pro	Pro	Ala	Gly	Arg	Arg	Arg	Met	Gln	Ala	Ala	Pro	Arg	Ala	Gly
1				5				10						15	
Cys	Gly	Ala	Ala	Leu	Leu	Leu	Trp	Ile	Val	Ser	Ser	Cys	Leu	Cys	Arg
			20					25					30		
Ala	Trp	Thr	Ala	Pro	Ser	Thr	Ser	Gln	Lys	Cys	Asp	Glu	Pro	Leu	Val
		35					40					45			
Ser	Gly	Leu	Pro	His	Val	Ala	Phe	Ser	Ser	Ser	Ser	Ser	Ile	Ser	Gly

aaaattgacc aagagattca caaatacaac accccaggat tcaactggtg cctctccaga
3960
gtccagttca accagatcgc ccctctcaag gccgccttga ggcagacaaa cgcctcggt
4020
cacgtccaca tccagggcga gctggtggag tccaactgcg gggcctcgcc gctgaccctc
4080
tccccatgt cgtccgccac cgacccttg cacctggatc acctggattc agccagtgcg
4140
gattttccat ataatccagg acaaggccaa gctataagaa atggagtcaa cagaaactcg
4200
gctatcattg gaggcgtcat tgctgtggtg attttcacca tcctgtgcac cctggtcttc
4260
ctgatccggt acatgttccg ccacaagggc acctaccata ccaacgaagc aaagggggcg
4320
gagtcggcag agagcgcgga cgccgccatc atgaacaacg accccaactt cacagagacc
4380
attgatgaaa gcaaaaagga atggctcatt tgaggggtgg ctacttggtt atgggatagg
4440
gaggagggaa ttactagggg ggagagaaaag ggacaaaagc accctgcttc atactcttga
4500
gcacatcctt aaaatatcag cacaagttgg gggaggcagg caatggaata taatggaata
4560
ttcttgagac tgatcacaaa aaaaaaaaaa acctttttaa tttttcttta tagctgagtt
4620
ttcccttctg tatcaaaaca aaataatata aaaaatgctt ttagagttaa agcaatgggt
4680
gaaatttgta ggtactatct gtcttatttt gtgtgtgttt agaggtgttc taaagaccg
4740
tggtaacagg gcaagttttc tacgttttta agagccctta gaacgtgggt atttttttc
4800
ttgagaaaag ctaatgcacc tacagatggc cccaacatt ctcttccttt tgcttctagt
4860
caaccttaat gggctgttac agaaactagt tcgtgtttat atactatttc ctttgatgtc
4920
ctataagtcg gaaaagaaag gggcaaagag aacctattat ttgccagttt ttaagcagag
4980
ctcaatctat gccagctctc tggcatctgg ggttctgac tgataccagc agttgaagga
5040
agagagtgca tggcacctgg tgtgtaacga cacaatcagc acaactggag agaggcatta
5100
aagaaccagg gaaggtagtt tgatttttca ttgaattcta caagctaata ttgttcacg
5160
tatgtagtct tagaccaata gctgtaacta tcagctgcaa taccatgggt accagctgtt
5220
acaaaagatt ttttctgtt ttatctgaaa catactggat ttatatatgt ataagcgcct
5280
caatggggaa ttagagccag atgttatgat ttgttgctc tttttctttt atagttatag
5340
caaaaatatg gataatttct agtgaatgca taaattaggt tgcgtttctt attttgctt
5400
aaatctctgg tagtttttcc acccctgtga cacaatccta atagacagtg tcctgtaaat
5460
ggacacaaca caataaagtc aagtatttat tgctgttact ctggatgata tggaaaacac
5520

ctggggcctc tgaaagttaa ctgcaacatg acagaggaca aagtgtggac catagtgtct
2340
catgacttgc agatgcagac gcctgtggtc ggctacaacc cagaaaaata ctcaagtaca
2400
cagctcgttt acagcgcctc catggaccag ataagtgcca tcaactgacag tgccgagtac
2460
tgccgagcagt atgtctccta tttctgcaag atgtcaagat tgttgaacac cccagatgga
2520
agcccttaca cttggtgggt tggcaaagcc aacgagaagc actactactg gggaggctct
2580
gggcctggaa tccagaaatg tgccctgcgc atcgaacgca actgcacaga tcccaagtac
2640
tactgtaact gcgacgcgga ctacaagcaa tggaggaagg atgctggttt cttatcatatc
2700
aaagatcacc tgccagttag ccaagtgggt gttggagata ctgaccgtca aggctcagaa
2760
gccaaattga gcgtaggtcc tctgcgtgc caaggagaca ggaattattg gaatgccgcc
2820
tctttcccaa acccatctc ctacctgcac ttctctactt tccaagggga aactagcgct
2880
gacatttctt tctacttcaa aacattaacc ccctggggag tgtttcttga aaatatggga
2940
aaggaagatt tcatacagct ggagctgaag tctgccacag aagtgtcctt ttcatttgat
3000
gtgggaaatg ggccagtaga gattgtagtg aggtcaccaa cccctctcaa cgatgaccag
3060
tggcaccggg tcaactgcaga gaggaatgtc aagcaggcca gcctacaggt ggaccggcta
3120
ccgcagcaga tccgcaaggc cccaacagaa ggccacaccc gcctggagct ctacagccag
3180
ttatttgtgg gtggtgctgg gggccagcag ggcttcttgg gctgcatccg ctcttgagg
3240
atgaatgggg tgacacttga cctggaggaa agagcaaagg tcacatctgg gttcatatcc
3300
ggatgctcgg gccattgcac cagctatgga acaaactgtg aaaatggagg caaatgccta
3360
gagagatacc acggttactc ctgcgattgc tctaatactg catatgatgg aacattttgc
3420
aacaagatg ttggtgcatt ttttgaagaa gggatgtggc tacgatataa ctttcaggca
3480
ccagcaacaa atgccagaga ctccagcagc agagtagaca acgctccga ccagcagaac
3540
tcccacccgg acctggcaca ggaggagatc cgcttcagct tcagcaccac caaggcgccc
3600
tgcattctcc tctacatcag ctcttcacc acagacttct tggcagtcct cgtcaaacc
3660
actggaagct tacagattcg atacaacctg ggtggcacc gagagccata caatattgac
3720
gtagaccaca ggaacatggc caatggacag cccacagtg tcaacatcac ccgccacgag
3780
aagaccatct ttctcaagct cgatcattat ctttctgtga gttaccatct gccaaagtca
3840
tccgacacc tttcaattc tccaagtgc ctctttctgg gaaaagttat agaaacaggg
3900

tatcaatggc ttcaggttga ctttggcaat cggaagcaga tcagtgccat tgcaacccaa
720
ggaaggtata gcagctcaga ttgggtgacc caataccgga tgctctacag cgacacaggg
780
agaaactgga aaccctatca tcaagatggg aatatctggg catttcccgg aaacattaac
840
tctgacggtg tggtcggca cgaattacag catccgatta ttgcccgcta tgtgcgcata
900
gtgcctctgg attggaatgg agaaggtcgc attggactca gaattgaagt ttatggctgt
960
tcttactggg ctgatgttat caactttgat ggccatgttg tattaccata tagattcaga
1020
aacaagaaga tgaaaacact gaaagatgtc attgccttga actttaagac gtctgaaagt
1080
gaaggagtaa tcctgcacgg agaaggacag caaggagatt acattacctt ggaactgaaa
1140
aaagccaagc tggtcctcag tttaaactta ggaagcaacc agcttggccc catatatggc
1200
cacacatcag tgatgacagg aagtttgctg gatgaccacc actggcactc tgtggtcatt
1260
gagcgccagg ggcgagcat taacctcact ctggacagga gcatgcagca cttccgtacc
1320
aatggagagt ttgactacct ggacttggac tatgagataa cctttggagg catcccttcc
1380
tctggcaagc ccagctccag cagtagaaag aatttcaaag gctgcatgga aagcatcaac
1440
tacaatggcg tcaacattac tgatcttgcc agaaggaaga aattagagcc ctcaaagtgt
1500
ggaaatttga gcttttcttg tgtggaaccc tatacgggtgc ctgtcttttt caacgctaca
1560
agttacctgg aggtgcccgg acggcttaac caggacctgt tctcagtcag tttccagttt
1620
aggacatgga accccaatgg tctcctggtc ttcagtcact ttgcgataa tttgggcaat
1680
gtggagattg acctcactga aagcaaagtg ggtgttcaca tcaacatcac acagaccaag
1740
atgagccaaa tcgatatttc ctcaggttct gggttgaatg atggacagtg gcacgaggtt
1800
cgcttcctag ccaaggaaaa ttttgctatt ctcaccatcg atggagatga agcatcagca
1860
gttcgaacta atagtcccct tcaagttaaa actggcgaga agtacttttt tggaggtttt
1920
ctgaaccaga tgaataactc aagtcactct gtccttcagc cttcattcca aggatgcatg
1980
cagctcattc aagtggacga tcaacttgta aatttatacg aagtggcaca aaggaagccg
2040
ggaagtttcg cgaatgtcag cattgacatg tgtgcgatca tagacagatg tgtgcccatt
2100
cactgtgagc atggtggaaa gtgctcgcaa acatgggaca gtttcaaag cacttgtgat
2160
gagacaggat acagtggggc cacctgccac aactctatct acgagccttc ctgtgaagcc
2220
tacaaacacc taggacagac atcaaattat tactggatag atcctgatgg cagcggacct
2280

cggcgagc
368

<210> 5300
<211> 122
<212> PRT
<213> Homo sapiens

<400> 5300
Xaa Cys Ser Gly Ser Asp His Ser Ser Leu Gly Leu Glu Gln Leu Gln
1 5 10 15
Asp Tyr Met Val Thr Leu Arg Ser Lys Leu Gly Pro Leu Glu Ile Gln
20 25 30
Gln Phe Ala Met Leu Leu Arg Glu Tyr Arg Leu Gly Leu Pro Ile Gln
35 40 45
Asp Tyr Cys Thr Gly Leu Leu Lys Leu Tyr Gly Asp Arg Arg Lys Phe
50 55 60
Leu Leu Leu Gly Met Arg Pro Phe Ile Pro Asp Gln Asp Ile Gly Tyr
65 70 75 80
Phe Glu Gly Phe Leu Glu Gly Val Gly Ile Arg Glu Gly Gly Ile Leu
85 90 95
Thr Asp Ser Phe Gly Arg Ile Lys Pro Asp Glu Leu His Val Gly Leu
100 105 110
Arg Ser Ala Gln Leu Thr Met Ala Arg Arg
115 120

<210> 5301
<211> 6712
<212> DNA
<213> Homo sapiens

<400> 5301
ntattagcca agctaagtta ctcttttgcc tctgttggtt actcaagtct tttctcttct
60
gtccttctgc cagccttacc ccactcctta atcctctgaa ccagcaaacc attgccaagt
120
tctgatgcaa agtggtttat aggctgact ggaccagact aaaagtgttc aaaatagcaa
180
gcaacaagga gcagaaatcc atattagaat gggatatgga ctatatattat attggtacag
240
aatgccttca ataaagagtt gtgagttgtg taggtgagtt gccatggagc tacaatatg
300
agttgatatt ctgaaatcct agacagccat ctccaagggt aagaaaaatc cttatgcact
360
cacttgcaaa gatatccaca gcatgctctt ggagcgccgc cggccgggag gcgaaggatg
420
caggcggctc cgcgcgccgg ctgcggggca gcgctcctgc tgtggattgt cagcagctgc
480
ctctgcagag cctggacggc tccctccacg tcccaaaaat gtgatgagcc acttgtctct
540
ggactcccc atgtggcttt cagcagctcc tctccatct ctggtagcta ttctcccggc
600
tatgccaaga taaacaagag aggaggtgct gggggatggt ctccatcaga cagcgaccat
660

```

385          390          395          400
Ser Leu Arg Asp Tyr Thr Pro Ala Ser Arg Ser Glu Asn Gln Asp Ser
          405          410          415
Leu Gln Ala Leu Ser Ser Leu Asp Glu Asp Asp Pro Asn Ile Leu Leu
          420          425          430
Ala Ile Gln Leu Ser Leu Gln Glu Ser Gly Leu Ala Leu Asp Glu Glu
          435          440          445
Thr Arg Asp Phe Leu Ser Asn Glu Ala Ser Leu Gly Ala Ile Gly Thr
          450          455          460
Ser Leu Pro Ser Arg Leu Asp Ser Val Pro Arg Asn Thr Asp Ser Pro
465          470          475          480
Arg Ala Ala Leu Ser Ser Ser Glu Leu Leu Glu Leu Gly Asp Ser Leu
          485          490          495
Met Arg Leu Gly Ala Glu Asn Asp Pro Phe Ser Thr Asp Thr Leu Ser
          500          505          510
Ser His Pro Leu Ser Glu Ala Arg Ser Asp Phe Cys Pro Ser Ser Ser
          515          520          525
Asp Pro Asp Ser Ala Gly Gln Asp Pro Asn Ile Asn Asp Asn Leu Leu
          530          535          540
Gly Asn Ile Met Ala Trp Phe His Asp Met Asn Pro Gln Ser Ile Ala
545          550          555          560
Leu Ile Pro Pro Ala Thr Thr Glu Ile Ser Ala Asp Ser Gln Leu Pro
          565          570          575
Cys Ile Lys Asp Gly Ser Glu Gly Val Lys Asp Val Glu Leu Val Leu
          580          585          590
Pro Glu Asp Ser Met Phe Glu Asp Ala Ser Val Ser Glu Gly Arg Gly
          595          600          605
Thr Gln Ile Glu Glu Asn Pro Leu Glu Glu Asn Ile Leu Ala Gly Glu
          610          615          620
Ala Ala Ser Gln Ala Gly Asp Ser Gly Asn Glu Ala Ala Asn Arg Gly
625          630          635          640
Asp Gly Ser Asp Val Ser Ser Gln Thr Pro Gln Thr Ser Ser Asp Trp
          645          650          655
Leu Glu Gln Val His Leu Val
          660

```

<210> 5299

<211> 368

<212> DNA

<213> Homo sapiens

<400> 5299

```

nactgcagcg gcagcgacca cagcagctctg ggcttgaggc agttacagga ttacatggtc
60
acgttgcgga gtaagctggg gccctcgag atccagcagt ttgcgatgct gctgcgggag
120
taccggctgg ggctgcccat ccaggactat tgcacaggcc tgetgaagct ctacggagac
180
cggcgcaagt tctctctct tgggatgcgg cccttcaccc cggaccagga catcggctac
240
ttcgagggct tcctggaggg cgtgggcatc cgcgagggcg gcatcctcac tgacagcttc
300
ggccgcatca agccagatga gctccacgtc ggctccgca gtgcgcagct cacgatggcg
360

```

<211> 663

<212> PRT

<213> Homo sapiens

<400> 5298

Cys Asp Arg Ala Val Arg Leu Thr Lys Gln Gly Ser Asn Thr Ser Gly
 1 5 10 15
 Ser Asp Thr Leu Ser Phe Pro Leu Leu Arg Ala Pro Ala Val Asp Cys
 20 25 30
 Gly Lys Gly His Leu Phe Cys Trp Glu Cys Leu Gly Glu Ala His Glu
 35 40 45
 Pro Cys Asp Cys Gln Thr Trp Lys Asn Trp Leu Gln Lys Ile Thr Glu
 50 55 60
 Met Lys Pro Glu Glu Leu Val Gly Val Ser Glu Ala Tyr Glu Asp Ala
 65 70 75 80
 Ala Asn Cys Leu Trp Leu Leu Thr Asn Ser Lys Pro Cys Ala Asn Cys
 85 90 95
 Lys Ser Pro Ile Gln Lys Asn Glu Gly Cys Asn His Met Gln Cys Ala
 100 105 110
 Lys Cys Lys Tyr Asp Phe Cys Trp Ile Cys Leu Glu Glu Trp Lys Lys
 115 120 125
 His Ser Ser Ser Thr Gly Gly Tyr Tyr Gly Cys Thr Arg Tyr Glu Val
 130 135 140
 Ile Gln His Val Glu Glu Gln Ser Lys Glu Met Thr Val Glu Ala Glu
 145 150 155 160
 Lys Lys His Lys Arg Phe Gln Glu Leu Asp Arg Phe Met His Tyr Tyr
 165 170 175
 Thr Arg Phe Lys Asn His Glu His Ser Tyr Gln Leu Glu Gln Arg Leu
 180 185 190
 Leu Lys Thr Ala Lys Glu Lys Met Glu Gln Leu Ser Arg Ala Leu Lys
 195 200 205
 Glu Thr Glu Gly Gly Cys Pro Asp Thr Thr Phe Ile Glu Asp Ala Val
 210 215 220
 His Val Leu Leu Lys Thr Arg Arg Ile Leu Lys Cys Ser Tyr Pro Tyr
 225 230 235 240
 Gly Phe Phe Leu Glu Pro Lys Ser Thr Lys Lys Glu Ile Phe Glu Leu
 245 250 255
 Met Gln Thr Asp Leu Glu Met Val Thr Glu Asp Leu Ala Gln Lys Val
 260 265 270
 Asn Arg Pro Tyr Leu Arg Thr Pro Arg His Lys Ile Ile Lys Ala Ala
 275 280 285
 Cys Leu Val Gln Gln Lys Arg Gln Glu Phe Leu Ala Ser Val Ala Arg
 290 295 300
 Gly Val Ala Pro Ala Asp Ser Pro Glu Ala Pro Arg Arg Ser Phe Ala
 305 310 315 320
 Gly Gly Thr Trp Asp Trp Glu Tyr Leu Gly Phe Ala Ser Pro Glu Glu
 325 330 335
 Tyr Ala Glu Phe Gln Tyr Arg Arg Arg His Arg Gln Arg Arg Arg Gly
 340 345 350
 Asp Val His Ser Leu Leu Ser Asn Pro Pro Asp Pro Asp Glu Pro Ser
 355 360 365
 Glu Ser Thr Leu Asp Ile Pro Glu Gly Gly Ser Ser Ser Arg Arg Pro
 370 375 380
 Gly Thr Ser Val Val Ser Ser Ala Ser Met Ser Val Leu His Ser Ser

tttttatttc tccagtgatc agaaacattg atatcaatcc ctattaaatt agtgggggga
3840
atattaactt tatctacagt gtattactgt atattaaact gaaatagtcc attaaaggat
3900
ttttttataa atttattttg gattaaaaat atcaacacca ataagttttt agaccaagtt
3960
gtaatttttc caatatagag tctttgcac acactgaggc atcttgcaca gctgcagtta
4020
agggtgagaaa gaatgctctg tgtgaagaca gtgtacacaa tgggttccgg tttccttgca
4080
ccttgtgcag tatcctttat ttctgtgctg ttctctcctg agcatgaaaa atgacatta
4140
tccaatttgt atttccttgg tacatatttt aaaaacaaca cagtcattga ctttacaatt
4200
cagtaatgaa gtttggaaca gcctattttg taaacaagtt aattttataa tgtaaaaaaa
4260
aaaagttaat ctaaccttga ctgtttattt gcactttcat agtctatact tgatacatc
4320
ccactttata tacagtagga ttctacaaac gtgtagatgt ttggccaaat gaatgctgtt
4380
aataatatgt aaaattcttt gattaaacat ttattactta aactatttcc atttttgtct
4440
cattaaatta taaacttcat ttaaaactaa ttagaaagca aatcttgctt tatattaaat
4500
accctccaat atgacagtat taatttggtt ctattatgta attgaatagt gcctaataat
4560
tttacagtaa cccacttgct gaaaattgta taccgaagag gtaaatttga tttcactttt
4620
ttgtttttga ttgtttttat ttttattttt ttattttttt aaaagattta tttattttat
4680
atatgtaagt acactgtagc tgtcttcaga cacaccagaa gagggcccca gatcttgta
4740
cagatgggtg tgagccacca tgtcgggtgct ggaattgaa ctcacgacct tgagaagagc
4800
agtcagtgtc cgtaaccgct gagccatctc tccagccctc caaagattca cttttaaaag
4860
atcatttgat gaaaagccag ggagtatggg gtgtgggggtg tggaaggcct tcaggaaaaag
4920
gcttgcagt gtgcgatgtc ttttcctgcc ctcccatga ggttcctagc cattagtagc
4980
agatgtaata atggtgacag agctcagata aaacaaaaag aatggagaaa tgccaaggct
5040
caaataaaaa tgaggcttga tatatttcca gaatgaaaaa atatttaata aaatcagggt
5100
caagagaaaag tccctatacc acttgtcttc ctccctcact tctggtcaga ccaagggcgc
5160
ctgcatcgga agctatctga cctcaagtca ggcacactgt gtcttcaggg cttctcagga
5220
tgcttcttta taagggtcaa ccacacaggt caggggaagac ccagggtacag gctgggggagc
5280
cccacaggta tagggctgag ggagcccagt aggtaccg
5318

<210> 5298

accttacagg gaatttcctt tgtacttaat tgaatagctt ttcccccttt tgctgacaaa
2220
aagaagagca agagaaagag aaacaaaaat gaaataaata agttgtattc cacactctaa
2280
gaaaatgcag tcctctatctt agcctaggct tgacaatact taaattgaac atttaaaacta
2340
aaggcttact ccctaactctt tgggtggctt tcctttaaaa aaaaaaaaaa agttttcttc
2400
attctagaaa tttatttttg ataatccga taacatatat gtctcaatc tctttgtgct
2460
cttcataac ttacttcctt tttgtctgag caatgtgaat tgaagtctct ttagtaccac
2520
atctaccata gtgtaattag ttttaatttt cacatgaatc aaaggtttcc tttcatgtct
2580
atttaccagtc caattgtgcc aaactcttac ttgtgtgctg actaacaagg catttaggtg
2640
tgcagcatcc tagagtgtc cagggcagtg tcagcgttct cgggagtaaa aggtgccact
2700
tggttagcaat gatattccag aattaaatgg gtttttggtg ccatggagac tgcatttata
2760
taaagttagc ctgtagctta agttaactaa acctaagtct gctgttaaaa acagtttatt
2820
ttaatattaa aatacagttg attagcaaca gcggtgctgt attttaagag acactttatt
2880
ggaagtgcaa tcatagttat ttgttttcac aattttacag tgcattctaa ttactgatgg
2940
gtgcaattac ttttaactgt gttttataaa atagaaaaaa agtggagttt tcatgagtta
3000
tagtaaatcc cagcattatt aagaaattca ataaaacatc ctgcgcaaca tgttaccgtg
3060
cctttgccta acctaaatgg atagttgcca gttaaataag tgagtaattc aaatttcaat
3120
gtctcttctg aagtaactat gctatgaatt gcaaagacct ccataaaacc acctatggcc
3180
ttgcttttac actaactata acaactaaat gttcaatcag tttgtttgcc taactagcaa
3240
atgctgacat gtgtttgttc tactgcgcaa tactcatttg ctgtgtgatt actgtttagt
3300
gttgaaaaaa atcaacttcc tagttatcag tgtcttactg tgaagaaaat actggtctta
3360
gttgtaatta ggatacaatg gtacagtgtg taattaaaac tagagtaaac tgttggaatg
3420
gctgttttac ttaaattatta tcaaaactag cataacataa gcaaaataga taagtacaac
3480
actccattta gtgttttgcc agattgttac cagaagtcta cagataccaa actttcagtt
3540
ctgagtttgt acaggcaagt cctgggctgg gtaaaaagtt atattaatat tgttatccac
3600
aagagatgtg attatgggtt ttgattactt ttttttttcc aaacctgct tttgaaatat
3660
ccttgactt aaaattcata ttgctaagac actgtattag aatatttaat attccccaga
3720
tcctcttagg ataaactgtg ggaatcctcc tatgccatgg atatcaaagg tccacattag
3780

aaccatgagc atagttatca gctagaacaa cgccttctta aaacagccaa agaaaagatg
600
gagcaattga gcagagctct caaagaaact gaaggaggct gtccagatac cactttcatt
660
gaagatgcag ttcattgtgct cttaaaaact cggcgcatte tcaagtgttc ttatccatat
720
ggatttttct tggaacctaa aagcacaaag aaagaaattt ttgaactaat gcaaacagac
780
ctagaaatgg tcaactgaaga ccttgcccag aaagtcaata ggccttacct tcgcacaccc
840
cgccacaaga tcatcaaagc agcatgcctt gtacagcaga agaggcaaga attcctggca
900
tctgtggctc ggggagtagc tcctgcagac tcaccagaag ctccaaggcg cagctttgct
960
ggtggaacat gggattggga atatttagga tttgcatcac cagaggaata tgctgaattt
1020
cagtatcgga ggaggcacag acaacgtcgt cgaggagatg ttcacagtct actcagtaat
1080
cctccagacc ctgatgagcc aagtgaagc actttagata ttccagaagg cggcagcagc
1140
agccgcaggc ctggcacatc cgtggtaagt tctgcatcta tgagtgtgct gcacagctct
1200
tcctcgctg actacacccc tgccagtcgc tctgaaaacc aggactctct tcaggctctg
1260
agttccttgg atgaagacga tcccaatata cttcttgcaa tacagttatc actgcaagag
1320
tctgggctgg ccctcgatga agaaactaga gacttcctca gtaatgaagc atccttaggt
1380
gcgataggca cttccttacc ttccaggctg gactctgtcc ccagaaatac agatagccct
1440
cgggctgcat tgagcagctc tgagcttttg gaacttggtg acagcctcat gagactagga
1500
gcagagaatg acccattttc aactgacacc ctgagctcac accctctcag tgaggcaaga
1560
agtgtattct gtccctcatc tagtgatcct gactcagctg gccaggaccc caacatcaat
1620
gacaatcttc tcggcaacat catggcttgg tttcatgaca tgaacctca gagtattgcc
1680
ctgattcctc cagcaactac agaaatcagt gcagattccc agctcccctg tatcaaagat
1740
gggtcagaag gtgtgaagga tgtggaactg gtgctgccag aagattcaat gtttgaagat
1800
gccagtgtca gtgaaggtag aggaaccagc atagaagaaa atccttttga agaaaatatt
1860
ctggcggggg aagcagcatc tcaagctggg gacagtggta acgaggcagc caacagagga
1920
gatggttcag atgtttcaag tcaaacacct caaacctcaa gtgactggct tgaacaagta
1980
catttagtgt gaactgcaca catctgggct ctaaatgaat tacaggtaac gatggatatg
2040
taggtggagt atgcttgata gagactttga ttcacttaat tccaactcag tgataaacca
2100
ctgacattag ggttgaatac agagaagttc ccttgaatgg tagcttcatt ttttatttta
2160

atcaagatca tctggataaa gaaatagaaa aactgcggaa gcaacttaaa gtgaagggtcc
 1440
 ccttcacgcg t
 1451

<210> 5296
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 5296
 Met Leu Ser Pro Glu Ala Glu Arg Val Leu Arg Tyr Leu Val Glu Val
 1 5 10 15
 Glu Glu Leu Ala Glu Glu Val Leu Ala Asp Lys Arg Gln Ile Val Asp
 20 25 30
 Leu Asp Thr Lys Arg Asn Gln Asn Arg Glu Gly Leu Arg Ala Leu Gln
 35 40 45
 Lys Asp Leu Ser Leu Ser Glu Asp Val Met Val Cys Phe Gly Asn Met
 50 55 60
 Phe Ile Lys Met Pro His Pro Glu Thr Lys Glu Met Ile Glu Lys Asp
 65 70 75 80
 Gln Asp His Leu Asp Lys Glu Ile Glu Lys Leu Arg Lys Gln Leu Lys
 85 90 95
 Val Lys Val Asn Arg Leu Phe Glu Ala Gln Gly Lys Pro Glu Leu Lys
 100 105 110
 Gly Phe Asn Leu Asn Pro Leu Asn Gln Asp Glu Leu Lys Ala Leu Lys
 115 120 125
 Val Ile Leu Lys Gly
 130

<210> 5297
 <211> 5318
 <212> DNA
 <213> Homo sapiens

<400> 5297
 tgtgacagag cagtaagact aacgaaacaa ggggtcaaata catctggatc tgatacactc
 60
 agcttcccat tgctgagagc tcttgctgtt gattgtggaa aaggacacct cttctgctgg
 120
 gagtgccttg gtgaagcaca tgagccttgt gactgccaaa catggaagaa ttggctgcaa
 180
 aaaataaccg aaatgaaacc agaagaactt gtgggagtta gtgaagccta cgaggatgcc
 240
 gccaatgtgc tctggttatt aactaactcc aagccttggtg ccaactgtaa gtctccaata
 300
 cagaagaatg aaggctgcaa tcacatgcag tgtgctaagt gcaagtatga cttttgctgg
 360
 atttgccttg aagagtggaa aaaacatagt tctgccactg gaggttatta cggatgtact
 420
 cgctatgaag tcattcaaca cgtggaggag caatccaagg aaatgactgt ggaggctgag
 480
 aaaaaacaca aacgatttca ggaacttgac agatttatgc actattatac aagatttaaa
 540

290

<210> 5295

<211> 1451

<212> DNA

<213> Homo sapiens

<400> 5295

tttttttttt tttttttttt tttttttttt attcagctaa catttattga gcccttaatg
60
aacacataag agttttgact tcacggcagt tcatactggg acctcagacc actgaaggca
120
gacagtaacg agcagtgctg gccgggcccc actttcagag ggggcggaag ggcattctga
180
cacgtgtcat atggtaagag gcgcattccac tcaccaggc ctggtgcagg actctgcaag
240
gccctcctga gtaaagagtg gccacgaagg gctgctaggc agcacctact cttggaatca
300
agcagggaaa aagtgcataa ttggagctgg cgggaggtgt gtgtgcctgc cccacagatg
360
gctgtggtga gccacaaagc accaagattc tgttcttcat tcagcaacca cccatgagcc
420
tcctgcttta ttccaatcgc atggcaccag cctgaaaacc tctctccctt ctgagaggaa
480
tgctggaatg acactccact ctgcccctcc ctccctcctt ccttgctcag ggtccatgtg
540
aacagcaggc cattgttggg aagtgcctgt tgcagtcatt cttacacccc cacagccact
600
gccccacaca cccactggtg gctaccaagg cccgtcaata gatcttgtgt ccaccgagcc
660
ctggtgtcca ggtccagcag ccagacaggc tgaaggttcc ctccctgcat cacagagtag
720
ccaagcacta caaagagggt ttcatggcca gattcctgac ggctggcccc ttacagggca
780
gacctgtccc ttacaggtgt caaggttggg gggctcctggg tctccatga cctggggggg
840
ttgctggtcc cccatcttgg ttcttgagtc tcacctcttc aagatgacct tgagagcttt
900
aagctcatcc tgggtgaggg ggttcaagtt aaaacccttc agctccggtt tgccttgggc
960
ctcaaaaagg cggttgacct tcactttaag ttgcttccgc agtttttcta tttctttatc
1020
cagatgatct tgatcttttt caatcatttc ctttgtctca gggtagggca tcttgataaa
1080
catgttcccg aagcaacca tcacatcttc agagaggctg agatccttct gcagggccct
1140
caggccctct cgattctgat tccttttagt gtccaggctc acaatctgcc gcttgtccgc
1200
cagcacctcc tcggcgagct cctccacttc tacaaggtag cgcagcactc gctctgcctc
1260
gggtgatagc atagcgccca ccaactccgc ttgcggctct cgcgcgaccc cgggatctcc
1320
gcttcgggaa catgtttatc aagatgcctc accctgagac aaaggaaatg attgaaaaag
1380

aacactgctt tgaaaagaca ttttcatgga gtgaaagaca taaagtggag accaagatga
 1200
 agttcaccag ctgatgacac ttccaaagag attagctcac ctttctccta ggcaattata
 1260
 atttaaaaaa aaaaaaaagg ccacttactg ccctctgtaa aagatgttaa catttctagt
 1320
 tttcttttag tgtgaatttt taaaatagca gttattcaag gttttagaac ttaataaata
 1380
 cctagtcaga agaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
 1428

<210> 5294

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5294

Met	Val	Leu	Leu	His	Val	Lys	Arg	Gly	Asp	Glu	Ser	Gln	Phe	Leu	Leu
1				5					10					15	
Gln	Ala	Pro	Gly	Ser	Thr	Glu	Leu	Glu	Glu	Leu	Thr	Val	Gln	Val	Ala
			20						25				30		
Arg	Val	Tyr	Asn	Gly	Arg	Leu	Lys	Val	Gln	Arg	Leu	Cys	Ser	Glu	Met
		35					40					45			
Glu	Glu	Leu	Ala	Glu	His	Gly	Ile	Phe	Leu	Pro	Pro	Asn	Met	Gln	Gly
	50					55				60					
Leu	Thr	Asp	Asp	Gln	Ile	Glu	Glu	Leu	Lys	Leu	Lys	Asp	Glu	Trp	Gly
65				70					75					80	
Glu	Lys	Cys	Val	Pro	Ser	Gly	Gly	Ala	Val	Phe	Lys	Lys	Asp	Asp	Ile
			85					90					95		
Gly	Arg	Arg	Asn	Gly	Gln	Ala	Pro	Asn	Glu	Lys	Met	Lys	Gln	Val	Leu
			100					105					110		
Lys	Lys	Thr	Ile	Glu	Glu	Ala	Lys	Ala	Ile	Ile	Ser	Lys	Lys	Gln	Val
		115				120						125			
Glu	Ala	Gly	Val	Cys	Val	Thr	Met	Glu	Met	Val	Lys	Asp	Ala	Leu	Asp
	130					135				140					
Gln	Leu	Arg	Gly	Ala	Val	Met	Ile	Val	Tyr	Pro	Met	Gly	Leu	Pro	Pro
145				150					155					160	
Tyr	Asp	Pro	Ile	Arg	Met	Glu	Phe	Glu	Asn	Lys	Glu	Asp	Leu	Ser	Gly
			165					170					175		
Thr	Gln	Ala	Gly	Leu	Asn	Val	Ile	Lys	Glu	Ala	Glu	Ala	Gln	Leu	Trp
		180				185						190			
Trp	Ala	Ala	Lys	Glu	Leu	Arg	Arg	Thr	Lys	Lys	Leu	Ser	Asp	Tyr	Val
	195					200					205				
Gly	Lys	Asn	Glu	Lys	Thr	Lys	Ile	Ile	Ala	Lys	Ile	Gln	Gln	Arg	Gly
	210					215					220				
Gln	Gly	Ala	Pro	Ala	Arg	Glu	Pro	Ile	Ile	Ser	Ser	Glu	Glu	Gln	Lys
225				230					235					240	
Gln	Leu	Met	Leu	Tyr	Tyr	His	Arg	Arg	Gln	Glu	Glu	Leu	Lys	Arg	Leu
			245					250					255		
Glu	Glu	Asn	Asp	Asp	Asp	Ala	Tyr	Leu	Asn	Ser	Pro	Trp	Ala	Asp	Asn
		260						265				270			
Thr	Ala	Leu	Lys	Arg	His	Phe	His	Gly	Val	Lys	Asp	Ile	Lys	Trp	Arg
		275				280						285			
Pro	Arg														

65					70					75				80
Arg	Gly	Gln	Arg	His	Thr	Val	Ala	Ala	Pro	Ala	Xaa	Arg	Ala	Arg
				85					90				95	
Gly	Ala	Glu	Pro	His	Ala	Ala	Ala	Ala	Pro	Arg	Arg	Leu	Pro	His
			100					105				110		
Pro	Pro	Pro	Arg	Ala	Gly	His	Pro	Ala	Pro	Gln	Leu	Ala	Gly	Trp
		115				120					125			
Gln	Ala	Pro	Arg	Leu	Lys	Arg	Thr	Val	Pro	Val	Arg	Arg	Ser	
	130					135					140			

<210> 5293

<211> 1428

<212> DNA

<213> Homo sapiens

<400> 5293

tcagactgtg tgggtgggtt ccccggccgc agctccgtac gggcttggat tgctgggct
 60
 cgggtgcaccc cagcctcccc cactcgggtt ctgagcttga gctggcggt ctttaactct
 120
 gcttcactgt tgctcttggc aacatccact tccgggagcg agtgccgtt ccccgctca
 180
 ccgcggtgta gggagcgtgg gattccggac tgtgagcggc tgtagtgcg tgcagctgc
 240
 tggcgatccg ggcacccctc gccggcagga ccccggggcc acgcagccgg ggccttctca
 300
 acgcctcagt acctcggcgg gaccgccatg gttctgctgc acgtgaagcg gggcgacgag
 360
 agccagttcc tgctgcaggc gcctgggagt accgagctgg aggagctcac ggtgcaggtg
 420
 gcccggtct ataattggcg gctcaagggt cagcgctct gctcagaaat ggaagaatta
 480
 gccgaacatg gcatatttct ccctccta atgcaaggac tgaccgatga tcagattgaa
 540
 gaattgaaat tgaaggatga atggggtgaa aaatgcgtac ccagcggagg tgcagtgtt
 600
 aaaaaggatg atattggacg aaggaatggg caagctccaa atgagaagat gaagcaagt
 660
 ttaaagaaga ctatagaaga agccaaggca ataatatcta agaaacaagt ggaagccggt
 720
 gtctgtgta ccatggagat ggtgaaagat gccttgacc agcttcgagg cgcggtgat
 780
 attgtttacc ccatggggtt gccaccgtat gatcccatcc gcatggagt tgaaaataag
 840
 gaagacttgt cgggaacaca ggcagggtc aacgtcatta aagaggcaga ggcgcagctg
 900
 tgggtggcag ccaaggagct gagaagaacg aagaagctt cagactacgt ggggaagaat
 960
 gaaaaaacca aaattatcgc caagattcag caaaggggac agggagctcc agcccgagag
 1020
 cctattatta gcagtgagga gcagaagcag ctgatgctgt actatcacag aagacaagag
 1080
 gagctcaaga gattggaaga aaatgatgat gatgcctatt taaactcacc atgggaggat
 1140

```
<210> 5291
<211> 767
<212> DNA
<213> Homo sapiens
```

```
<210> 5292
<211> 142
<212> PRT
<213> Homo sapiens
```

4459

50 55 60
 Ala Pro Lys Asp Ile Met Thr Asn Thr His Ala Lys Ser Ile Leu Asn
 65 70 75 80
 Ser Met Asn Ser Leu Arg Lys Ser Asn Thr Leu Cys Asp Val Thr Leu
 85 90 95
 Arg Val Glu Gln Lys Asp Phe Pro Ala His Arg Ile Val Leu Ala Ala
 100 105 110
 Cys Ser Asp Tyr Phe Cys Ala Met Phe Thr Ser Glu Leu Ser Glu Lys
 115 120 125
 Gly Lys Pro Tyr Val Asp Ile Gln Gly Leu Thr Ala Ser Thr Met Glu
 130 135 140
 Ile Leu Leu Asp Phe Val Tyr Thr Glu Thr Val His Val Thr Val Glu
 145 150 155 160
 Asn Val Gln Glu Leu Leu Pro Ala Ala Cys Leu Leu Gln Leu Lys Gly
 165 170 175
 Val Lys Gln Ala Cys Cys Glu Phe Leu Glu Ser Gln Leu Asp Pro Ser
 180 185 190
 Arg

<210> 5289
 <211> 361
 <212> DNA
 <213> Homo sapiens

<400> 5289
 agatctctgt acacatggtta caccagacag ctatattcca tgccttgag acctgtgcaa
 60
 agcactatgg gaagttatgc tcagctatta taggactatg gaatggcatg aaaagcatga
 120
 caatgaggat actgcttcag cttctgaagg ggaagtatat gatagggtcc tgaagaaact
 180
 tattttgatc ggggctacat taaaaaagaa attagaacat ggacttacac gaatatggca
 240
 ggatgttcag ctaaaagtaa aaacctactt gcttggaact gatttgtcta tattcaaata
 300
 tgatgatttc atctttgttt tggatataat cagcagggtg atgcaagttg gagaagaatt
 360
 c
 361

<210> 5290
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 5290
 Met Leu Ser Tyr Tyr Arg Thr Met Glu Trp His Glu Lys His Asp Asn
 1 5 10 15
 Glu Asp Thr Ala Ser Ala Ser Glu Gly Glu Val Tyr Asp Arg Val Leu
 20 25 30
 Lys Lys Leu Ile Leu Ile Gly Ala Thr Leu Lys Lys Lys Leu Glu His
 35 40 45
 Gly Leu Thr Arg Ile Trp Gln Asp Val Gln Leu Lys Val Lys Thr Tyr

530 535 540
 Ala Cys Asp Glu Ser Val Leu Met Asp Leu Lys Ala Leu Leu Leu Glu
 545 550 555 560
 Ala Lys Gln Lys Val Pro Pro Val Leu Gln Val Leu His Cys Gly Asp
 565 570 575
 Glu Ser Met Leu Asp Ile Gly Gly Glu Arg Gly Cys Ala Phe Cys Gly
 580 585 590
 Gly Leu Gly His Arg Ile Thr Asp Cys Pro Lys Leu Glu Ala Met Gln
 595 600 605
 Thr Lys Gln Val Ser Asn Ile Gly Arg Lys Asp Tyr Leu Ala His Ser
 610 615 620
 Ser Met Asp Phe
 625

<210> 5287
 <211> 581
 <212> DNA
 <213> Homo sapiens

<400> 5287
 nnagagcctc cagagcctcc gggctctgggc ggcgcttcgg ctctcccca gccgcctgct
 60
 agccccgcgc cgcactccat cccacagggc tggggacggg ccagggtgcgg ctgtgtgggt
 120
 tcgggagcgg agttgcagaa tccaaggacc cattttgttc tttctccgca ctgctttatg
 180
 ggaggcatta tggcccccaa agacataatg acaaatactc atgctaaatc catcctcaat
 240
 tcaatgaact ccctcaggaa gagcaatacc ctctgtgatg tgacattgag agtagagcag
 300
 aaagacttcc ctgccatcg gattgtgctg gctgcctgta gtgattactt ctgtgccatg
 360
 ttcactagtg agctctcaga gaaggggaaa ccttatgttg acatccaagg tttgactgcc
 420
 tctaccatgg aaattttatt ggactttgtg tacacagaaa cggtagatgt gacagtggag
 480
 aatgtacaag aactgcttcc tgcagcctgt ctgcttcagt tgaaagggtg gaaacaagcc
 540
 tgctgtgagt tcttagaaag tcagttggac ccttcacgcg t
 581

<210> 5288
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 5288
 Xaa Glu Pro Pro Glu Pro Pro Gly Leu Gly Gly Ala Ser Ala Pro Pro
 1 5 10 15
 Glu Pro Pro Ala Ser Pro Ala Pro His Ser Ile Pro Thr Gly Trp Gly
 20 25 30
 Arg Ala Arg Cys Gly Cys Val Gly Ser Gly Ala Glu Leu Gln Asn Pro
 35 40 45
 Arg Thr His Phe Val Leu Ser Pro His Cys Phe Met Gly Gly Ile Met

100 105 110
 Glu Lys Gln Leu Lys Glu Glu Glu Lys Ile Leu Glu Ser Val Ala Glu
 115 120 125
 Gly Arg Ala Leu Met Ser Val Lys Glu Met Ala Lys Gly Ile Thr Tyr
 130 135 140
 Asp Asp Pro Ile Lys Thr Ser Trp Thr Pro Pro Arg Tyr Val Leu Ser
 145 150 155 160
 Met Ser Glu Glu Arg His Glu Arg Val Arg Lys Lys Tyr His Ile Leu
 165 170 175
 Val Glu Gly Asp Gly Ile Pro Pro Pro Ile Lys Ser Phe Lys Glu Met
 180 185 190
 Lys Phe Pro Ala Ala Ile Leu Arg Gly Leu Lys Lys Lys Gly Ile His
 195 200 205
 His Pro Thr Pro Ile Gln Ile Gln Gly Ile Pro Thr Ile Leu Ser Gly
 210 215 220
 Arg Asp Met Ile Gly Ile Ala Phe Thr Gly Ser Gly Lys Thr Leu Val
 225 230 235 240
 Phe Thr Leu Pro Val Ile Met Phe Cys Leu Glu Gln Glu Lys Arg Leu
 245 250 255
 Pro Phe Ser Lys Arg Glu Gly Pro Tyr Gly Leu Ile Ile Cys Pro Ser
 260 265 270
 Arg Glu Leu Ala Arg Gln Thr His Gly Ile Leu Glu Tyr Tyr Cys Arg
 275 280 285
 Leu Leu Gln Glu Asp Ser Ser Pro Leu Leu Arg Cys Ala Leu Cys Ile
 290 295 300
 Gly Gly Met Ser Val Lys Glu Gln Met Glu Thr Ile Arg His Gly Val
 305 310 315 320
 His Met Met Val Ala Thr Pro Gly Arg Leu Met Asp Leu Leu Gln Lys
 325 330 335
 Lys Met Val Ser Leu Asp Ile Cys Arg Tyr Leu Ala Leu Asp Glu Ala
 340 345 350
 Asp Arg Met Ile Asp Met Gly Phe Glu Gly Asp Ile Arg Thr Ile Phe
 355 360 365
 Ser Tyr Phe Lys Gly Gln Arg Gln Thr Leu Leu Phe Ser Ala Thr Met
 370 375 380
 Pro Lys Lys Ile Gln Asn Phe Ala Lys Ser Ala Leu Val Lys Pro Val
 385 390 395 400
 Thr Ile Asn Val Gly Arg Ala Gly Ala Ala Ser Leu Asp Val Ile Gln
 405 410 415
 Glu Val Glu Tyr Val Lys Glu Glu Ala Lys Met Val Tyr Leu Leu Glu
 420 425 430
 Cys Leu Gln Lys Thr Pro Pro Pro Val Leu Ile Phe Ala Glu Lys Lys
 435 440 445
 Ala Asp Val Asp Ala Ile His Glu Tyr Leu Leu Leu Lys Gly Val Glu
 450 455 460
 Ala Val Ala Ile His Gly Gly Lys Asp Gln Glu Glu Arg Thr Lys Ala
 465 470 475 480
 Ile Glu Ala Phe Arg Glu Gly Lys Lys Asp Val Leu Val Ala Thr Asp
 485 490 495
 Val Ala Ser Lys Gly Leu Asp Phe Pro Ala Ile Gln His Val Ile Asn
 500 505 510
 Tyr Asp Met Pro Glu Glu Ile Glu Asn Tyr Val His Arg Ile Gly Arg
 515 520 525
 Thr Gly Arg Ser Gly Asn Thr Gly Ile Ala Thr Thr Phe Ile Asn Lys

agtgccacca tgccgaagaa gattcagaac tttgctaaga gtgcccttgt aaagcctgtg
 1200
 accatcaatg tggggcgtagc tggggctgcc agcctggatg tcatccagga ggtagaatat
 1260
 gtgaaggagg aggccaagat ggtgtacctg ctcgagtgcc tgcagaagac acccccgcct
 1320
 gtactcatct ttgcagagaa gaaggcagac gtggacgcc tccacgagta cctgctgctc
 1380
 aagggggttg agggcgtagc catccatggg ggcaaagacc aggaggaacg gactaaggcc
 1440
 atcgaggcat tccgggaggg caagaaggat gtcctagtag ccacagacgt tgcctccaag
 1500
 ggcctggact tccctgccat ccagcacgtc atcaattatg acatgccaga ggagattgag
 1560
 aactatgtac accggattgg cgcaccggg cgctcgggaa acacaggcat cgccactacc
 1620
 ttcataca aagcgtgtga tgagtcagtg ctgatggacc tcaaagcgct gctgctagaa
 1680
 gccaaagcaga aggtgccgcc cgtgctgcag gtgctgcatt gcggggatga gtccatgctg
 1740
 gacattggag gagagcgagg ctgtgccttc tgcggggggc tgggtcatcg gatcactgac
 1800
 tgccccaac tcgaggctat gcagaccaag caggtcagca acatcggtcg caaggactac
 1860
 ctggcccaca gtcctatgga cttctgagcc gacagtcttc cttctctctc aagaggcctc
 1920
 agtccccaag actgccacca gtctacacat acagcagccc cctggacaga atcagcattt
 1980
 cagctcagct ggcctggaat gggccaggct ggtcctggct gcctgttccc tgtgctcttc
 2040
 agaattactg tttttgtttc cttttacccc agctgccatt aaagcccaaa cctctagccc
 2100
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 2155

<210> 5286

<211> 628

<212> PRT

<213> Homo sapiens

<400> 5286

Xaa	Arg	Val	Gln	Gln	Arg	Met	Glu	Glu	Ser	Glu	Pro	Glu	Arg	Lys	Arg
1			5					10						15	
Ala	Arg	Thr	Asp	Glu	Val	Pro	Ala	Gly	Gly	Ser	Arg	Ser	Glu	Ala	Glu
		20						25					30		
Asp	Glu	Asp	Asp	Glu	Asp	Tyr	Val	Pro	Tyr	Val	Pro	Leu	Arg	Gln	Arg
	35					40						45			
Arg	Gln	Leu	Leu	Leu	Gln	Lys	Leu	Leu	Gln	Arg	Arg	Arg	Lys	Gly	Ala
	50					55					60				
Ala	Glu	Glu	Glu	Gln	Gln	Asp	Ser	Gly	Ser	Glu	Pro	Arg	Gly	Asp	Glu
	65				70					75				80	
Asp	Asp	Ile	Pro	Leu	Gly	Pro	Gln	Ser	Asn	Val	Ser	Leu	Leu	Asp	Gln
			85					90						95	
His	Gln	His	Leu	Lys	Glu	Lys	Ala	Glu	Ala	Arg	Lys	Glu	Ser	Ala	Lys

	195		200		205										
Lys	Ala	Val	Ala	Lys	Gly	Asp	Leu	His	Gln	Ala	Ser	Thr	Ser	Ser	Arg
	210				215						220				
Arg	Ala	Leu	Phe	Leu	Ala	Val	Leu	Ser	Ile	Thr	Ile	Gly	Thr	Gly	Val
225				230					235					240	
Tyr	Val	Gly	Val	Ala	Val	Ala	Leu	Ile	Ala	Tyr	Leu	Ser	Lys	Asn	Asn
			245					250						255	

His Leu

<210> 5285

<211> 2155

<212> DNA

<213> Homo sapiens

<400> 5285

```

nnacgcgtgc agcaaagaat ggaggagtcg gaacccgaac ggaagcgggc tcgcaccgac
60
gaggtgcctg ccggaggaag ccgctccgag gcggaagatg aggacgacga ggactacgtg
120
ccctatgtgc cgttacggca gcgccggcag ctactgctcc agaagctgct gcagcgaaga
180
cgcaagggag ctgcggagga agagcagcag gacagcggta gtgaaccccg gggagatgag
240
gacgacatcc cgctaggccc tcagtccaac gtcagcctcc tggatcagca ccagcacctt
300
aaagagaagg ctgaagcgcg caaagagtct gccaaaggaga agcagctgaa ggaagaagag
360
aagatcctgg agagtgttgc cgagggccga gcattgatgt cagtgaagga gatggctaag
420
ggcattacgt atgatgaccc catcaaaacc agctggactc caccocgtta tgttctgagc
480
atgtctgaag agcgacatga gcgcgtgcgg aagaaatacc acatcctggt ggagggagac
540
ggtatcccac caccatcaa gagcttcaag gaaatgaagt ttctgcagc catcctgaga
600
ggcctgaaga agaaaggcat tcaccacca acaccattc agatccaggg catccccacc
660
attctatctg gccgtgacat gataggcatc gctttcacgg gttcaggcaa gacactggtg
720
ttcacgttgc ccgtcatcat gttctgcctg gaacaagaga agaggttacc cttctcaaag
780
cgcgaggggc cctatggact catcatctgc ccctcgcggg agctggcccg gcagacccat
840
ggcatcctgg agtactactg ccgcctgctg caggaggaca gctcaccact cctgcgctgc
900
gccctctgca ttgggggcat gtccgtgaaa gagcagatgg agaccatccg acacgggtgta
960
cacatgatgg tggccacccc ggggcgcctc atggatttgc tgcagaagaa gatggtcagc
1020
ctagacatct gtcgctacct ggccctggac gaggctgacc gcatgatcga catgggcttc
1080
gagggtgaca tccgtaccat cttctcctac ttcaagggcc agcgacagac cctgctcttc
1140

```

gggctgggaa gaaagaggca acaccacggc tggcaggagc cccgctgcac tgctctgcag
 1440
 acccattggc ctgacctga gaagcagagc cagcaaagcc cgggacctgc ccctctttct
 1500
 ttcccttcac accaccccag cctcaggatg tcaagccacc tccggaacgt gtctacactc
 1560
 cacagctacc cgcagcaat acgcactctt gggacctcgc tgatctagga tggggaggca
 1620
 ggccaccgcc cctccaaga ctctcaaga aagagccccg cggttgctcc ggaaactcga
 1680
 ggcaactgcag ctatgggcac tgcctcagcc taaagacaca ggggcgctc ccaatcaccg
 1740
 cgctggcgga tgctcacccc gtcataagca gaaactagt atcctggaaa tgagatgggc
 1800
 cttactctgt cgactaaatg aatagctatt ttctgtcat ttttaaagt gcaactcttg
 1860
 cttcatgctg cttaagttac cagatgaatg ctgagaaata agtaatcaca gacatttta.
 1920
 taccatttca ttgctgtttt acgagtgttc attacttaac aaaaaattat ctttagctt
 1980
 tttcgctta
 1989

<210> 5284

<211> 258

<212> PRT

<213> Homo sapiens

<400> 5284

Met	Asp	Gly	Ile	Ile	Glu	Gln	Lys	Ser	Met	Leu	Val	His	Ser	Lys	Ile
1			5						10					15	
Ser	Asp	Ala	Gly	Lys	Arg	Asn	Gly	Leu	Ile	Asn	Thr	Arg	Asn	Leu	Met
			20					25					30		
Ala	Glu	Ser	Arg	Asp	Gly	Leu	Val	Ser	Val	Tyr	Pro	Ala	Pro	Gln	Tyr
			35				40					45			
Gln	Ser	His	Arg	Val	Gly	Ala	Ser	Thr	Val	Pro	Ala	Ser	Leu	Asp	Ser
	50					55				60					
Ser	Arg	Ser	Glu	Pro	Met	Gln	Gln	Leu	Leu	Asp	Pro	Asn	Thr	Leu	Gln
	65				70				75					80	
Gln	Ser	Val	Glu	Ser	Arg	Tyr	Arg	Pro	Asn	Ile	Ile	Leu	Tyr	Ser	Glu
			85					90					95		
Gly	Val	Leu	Arg	Ser	Trp	Gly	Asp	Gly	Val	Ala	Ala	Asp	Cys	Cys	Glu
			100					105					110		
Thr	Thr	Phe	Ile	Glu	Asp	Arg	Ser	Pro	Thr	Lys	Asp	Ser	Leu	Glu	Tyr
		115				120						125			
Pro	Asp	Gly	Lys	Phe	Ile	Asp	Leu	Ser	Ala	Asp	Asp	Ile	Lys	Ile	His
	130					135					140				
Thr	Leu	Ser	Tyr	Asp	Val	Glu	Glu	Glu	Glu	Glu	Phe	Gln	Glu	Leu	Glu
	145				150				155					160	
Ser	Asp	Tyr	Ser	Ser	Asp	Thr	Glu	Ser	Glu	Asp	Asn	Phe	Leu	Met	Met
			165					170					175		
Pro	Pro	Arg	Asp	His	Leu	Gly	Leu	Ser	Val	Phe	Ser	Met	Leu	Cys	Cys
			180				185						190		
Phe	Trp	Pro	Leu	Gly	Ile	Ala	Ala	Phe	Tyr	Leu	Ser	His	Glu	Thr	Asn

85

90

<210> 5283

<211> 1989

<212> DNA

<213> Homo sapiens

<400> 5283

naggccgctt gggcgactt gccgggtcac cttgtcccgg aggagaaatg gcttccctga
60
ggcaagtgtgta acctacattc ccagcccacc agcctgacgc ccagccaggg agagagtacc
120
atggatggca tcattgaaca gaagagcatg ctggtgcaca gtaaaatcag tgatgctggc
180
aagaggaatg gtttaattaa caccagaaac ttgatggccg agagcagaga tggctctggg
240
tctgtttacc cagcgcccca gtaccagagc caccgggtgg gggccagcac agtgccggcc
300
agcctggaca gcagcaggag tgagccgatg cagcagctgc tggaccccaa caccctgcag
360
cagtcatgtg agtcccgtc cgggccaac atcatcctct attcagaggg cgtgctgcgc
420
tcctgggggg acggtgtggc cgccgactgc tgcgagacca ccttcacga ggaccggtcg
480
cccaccaaag acagcctcga gtaccgggat gggaagtcca ttgaccttc agctgatgac
540
ataaaaatcc acaccctgtc ctacgatgtg gaggaggagg aggagttcca ggagctggag
600
agcgactact caagcgacac agagagtgtg gacaatttcc tcatgatgcc ccgcggggac
660
cacctggggc tcagtgtctt ctccatgctc tgctgcttct ggcctctggg catcgcagcc
720
ttctacttgt cccatgagac caacaaagcc gtggccaagg gggacttgca ccaggccagc
780
accagctccc ggcgggccct attcctggca gtgctgtcca tcaccattgg gactggcgtc
840
tatgtgggcg tggccgtggc cctcatcgcc tacctctcca agaacaacca cctgtgagct
900
tcctgcgaat ggagggggag caccggggc caggtctgtg tggacgtgga ggaagcaggc
960
ataccgcatg atgctgtaca gtacaaatga ttgccaaatg atgccacgaa gccctgggat
1020
ttcctacca tggatttatt ttgtttttat cctttaattt catgttcaca gcactgtgta
1080
gagcaccaga cagacgggca ctgctaattc ttccaaagga aagctccaaa gatcccagcc
1140
cgcaaggctg tctctggatg gattctgggt gatgaatggc aacggggctc tctgcagcct
1200
gccagtggcc agagtggcac cgcattagca atatacaaac agtccaaaaa agtgtttatt
1260
ttttatggaa tacggtgcaa taggcagagg acaagggaca catcactctt ctgtctgtgg
1320
ccctgctgga gtcccttgtg cccccggag tccacacgcc ttccctgcaa gacgagaatg
1380

275	280	285
Lys Glu Ser Leu Val Ile Asp Arg Pro Arg Val Arg Lys Gln Thr Lys		
290	295	300
His Tyr Asn Ser Phe Glu Glu Asp Glu Leu Met Glu Phe Ser Glu Leu		
305	310	315
Asp Ser Asp Ser Asp Glu Arg Pro Thr Arg Ser Arg Arg Leu Asn Asp		
	325	330
Lys Ala Arg Arg Tyr Leu Arg Ala Glu Cys Phe Arg Val Glu Lys Asn		
	340	345
Leu Leu Ile Phe Gly Trp Gly Arg Trp Lys Asp Ile Leu Thr His Gly		
	355	360
Arg Phe Lys Trp His Leu Asn Glu Lys Asp Met Glu Met Ile Cys Arg		
	370	375
Ala Leu Leu Val Tyr Cys Val Lys His Tyr Lys Gly Asp Glu Lys Ile		
385	390	395
Lys Ser Phe Ile Trp Glu Leu Ile		400
	405	

<210> 5281

<211> 336

<212> DNA

<213> Homo sapiens

<400> 5281

tgatcaacaa tacttttcag agtctcttgg ggtgtgatga gttaagcttc ctactggatg
 60
 aaatgcaaac cgcccaaat aaataccagg agcttaagaa tatttgcagc tatagggctc
 120
 aggcattcct ggtactcaca ggtctgacag ccacagttgg agacacagct atttcttcag
 180
 aagagaaaac acaacgcatg tcattaatga gacatcacat gggacaatca ttgtccaaag
 240
 aagttgcaca tgtcctcacc aaacctggag cagatcacga ttgggaaaac ctagagaaaag
 300
 acttgagatt gtcattaat ggggattatg aagaag
 336

<210> 5282

<211> 91

<212> PRT

<213> Homo sapiens

<400> 5282

Met	Gln	Thr	Ala	Gln	Asn	Lys	Tyr	Gln	Glu	Leu	Lys	Asn	Ile	Cys	Ser
1				5				10					15		
Tyr	Arg	Ala	Gln	Ala	Phe	Leu	Val	Leu	Thr	Gly	Leu	Thr	Ala	Thr	Val
		20						25					30		
Gly	Asp	Thr	Ala	Ile	Ser	Ser	Glu	Glu	Lys	Thr	Gln	Arg	Met	Ser	Leu
		35					40					45			
Met	Arg	His	His	Met	Gly	Gln	Ser	Leu	Ser	Lys	Glu	Val	Ala	His	Val
		50			55					60					
Leu	Thr	Lys	Pro	Gly	Ala	Asp	His	Asp	Trp	Glu	Asn	Leu	Glu	Lys	Asp
65				70					75					80	
Leu	Arg	Leu	Leu	Ile	Asn	Gly	Asp	Tyr	Glu	Glu					

aagcagacca aacactacaa ctcgtttgag gaagacgagc tcatggagtt ttcagagtta
 960
 gacagcgact cagacgaaag gcccacgaga tccaggcgcc tcaatgacaa agccaggcgc
 1020
 tacctccgag cggagtgcct ccgggtagag aagaacctgc tcatctttgg ctggggccgg
 1080
 tggaaggaca tctgactca tggccgattc aagtggcatt tgaacgagaa ggacatggag
 1140
 atgatttgcc gtgccctcct ggtgtactgt gtcaagcatt ataaggggga cgagaagatc
 1200
 aagagtttca ttgggaact gatca
 1225

<210> 5280

<211> 408

<212> PRT

<213> Homo sapiens

<400> 5280

Ile	Asn	Gly	Ala	Glu	Glu	Lys	Ile	Leu	Glu	Asp	Phe	Arg	Lys	Thr	His
1			5					10						15	
Ser	Pro	Asp	Ala	Pro	Asp	Phe	Gln	Leu	Gln	Ala	Met	Ile	Gln	Ala	Ala
	20						25					30			
Gly	Lys	Leu	Val	Leu	Ile	Asp	Lys	Leu	Leu	Pro	Lys	Leu	Ile	Ala	Gly
	35					40					45				
Gly	His	Lys	Val	Leu	Ile	Phe	Ser	Gln	Met	Val	Arg	Cys	Leu	Asp	Ile
	50				55					60					
Leu	Glu	Asp	Tyr	Leu	Ile	Gln	Arg	Arg	Tyr	Thr	Tyr	Glu	Arg	Ile	Asp
65			70						75					80	
Gly	Arg	Val	Arg	Gly	Asn	Leu	Arg	Gln	Ala	Ala	Ile	Asp	Arg	Phe	Ser
			85					90						95	
Lys	Pro	Asp	Ser	Asp	Arg	Phe	Val	Phe	Leu	Leu	Cys	Thr	Arg	Ala	Gly
	100							105					110		
Gly	Leu	Gly	Ile	Asn	Leu	Thr	Ala	Ala	Asp	Thr	Cys	Ile	Ile	Phe	Asp
	115					120						125			
Ser	Asp	Trp	Asn	Pro	Gln	Asn	Asp	Leu	Gln	Ala	Gln	Ala	Arg	Cys	His
	130				135						140				
Arg	Ile	Gly	Gln	Ser	Lys	Ala	Val	Lys	Val	Tyr	Arg	Leu	Ile	Thr	Arg
145				150						155					160
Asn	Ser	Tyr	Glu	Arg	Glu	Met	Phe	Asp	Lys	Ala	Ser	Leu	Lys	Leu	Gly
			165					170						175	
Leu	Asp	Lys	Ala	Val	Leu	Gln	Thr	Ser	Thr	Glu	Arg	Ala	Ala	Pro	Met
	180							185					190		
Gly	Thr	Ala	Leu	Ser	Lys	Met	Glu	Val	Glu	Asp	Leu	Leu	Arg	Lys	Gly
	195					200					205				
Ala	Tyr	Gly	Ala	Leu	Met	Asp	Glu	Glu	Asp	Glu	Gly	Ser	Lys	Phe	Cys
	210				215						220				
Glu	Glu	Asp	Ile	Asp	Gln	Ile	Leu	Gln	Arg	Arg	Thr	His	Thr	Ile	Thr
225					230					235				240	
Ile	Gln	Ser	Glu	Gly	Lys	Gly	Ser	Thr	Phe	Ala	Lys	Ala	Ser	Phe	Val
			245					250						255	
Ala	Ser	Gly	Asn	Arg	Thr	Asp	Ile	Ser	Leu	Asp	Asp	Pro	Asn	Phe	Trp
			260					265					270		
Gln	Lys	Trp	Ala	Lys	Ile	Ala	Glu	Leu	Asp	Thr	Glu	Ala	Lys	Asn	Glu

<400> 5278

```

Ile Tyr Asp Phe Met Asp Asp Pro Lys Pro His Lys Lys Leu Gly Pro
 1           5           10           15
Gln Ala Trp Leu Val Ala Ala Ile Thr Ala Thr Glu Leu Leu Ile Val
      20      25      30
Val Lys Tyr Asp Pro His Thr Leu Thr Leu Ser Leu Pro Phe Tyr Ile
      35      40      45
Ser Gln Cys Trp Thr Leu Gly Ser Val Leu Ala Leu Thr Trp Thr Val
      50      55      60
Trp Arg Phe Phe Leu Arg Asp Ile Thr Leu Arg Tyr Lys Glu Thr Arg
      65      70      75      80
Trp Gln Lys Trp Gln Asn Lys Asp Asp Gln Gly Ser Thr Val Gly Asn
      85      90      95
Gly Asp Gln His Pro Leu Gly Leu Asp Glu Asp Leu Leu Gly Pro Gly
      100     105     110
Val Ala Glu Gly Glu Gly Ala Pro Thr Pro Asn
      115     120

```

<210> 5279

<211> 1225

<212> DNA

<213> Homo sapiens

<400> 5279

```

atcaatggag cagaggagaa aattctagaa gatttccgaa aaaccacag ccctgatgcc
60
cctgactttc agctgcaggc catgattcag gcagcaggaa agcttgtgtt gattgataaa
120
ctactcccta agctgattgc aggtggccac aaagtactca ttttctccca gatggtgcgc
180
tgcctcgaca tcctagaaga ttatttaatc cagagaagat acacctatga acgtattgat
240
ggcgagtagc ggggaaacct gcgccaggct gccatcgacc gcttcagcaa gcctgactca
300
gaccgctttg tcttcttact gtgcaccaga gcgggaggcc tggggatcaa tctcacagct
360
gctgatacct gcatcatatt tgattctgac tggaaccac aaaatgactt gcaggctcag
420
gcccgatgtc accgcatagg ccagagcaaa gctgtgaagg tgtatcgctt catcactcga
480
aattcctacg agcgcgagat gtttgacaag gccagcctaa agctggggct ggacaaggct
540
gttcttcaga catcaaccga aagggcggca ccaatgggta cagcactctc aaaaatggag
600
gtggaggacc tactccggaa aggtgcttat ggagccttaa tggatgaaga agatgaaggc
660
tccaagtctt gtgaagaaga catagaccag attctgcaga ggcgaacgca caccatcacc
720
atccagtctg aggggaaagg gtccactttt gccaaaggcta gctttgtggc ttcaggaaac
780
agaacagata tttccttaga tgatcctaac ttttggcaga aatgggctaa aatagctgaa
840
ctagacactg aagcaaagaa tgaaaaggaa agcttagtga tcgaccgacc tcgctgaga
900

```

<213> Homo sapiens

<400> 5276

```

Met Ala Met Gln Ala Ala Lys Arg Ala Asn Ile Arg Leu Pro Pro Glu
 1             5             10             15
Val Asn Arg Ile Leu Tyr Ile Arg Asn Leu Pro Tyr Lys Ile Thr Ala
      20             25             30
Glu Glu Met Tyr Asp Ile Phe Gly Lys Tyr Gly Pro Ile Arg Gln Ile
      35             40             45
Arg Val Gly Asn Thr Pro Glu Thr Arg Gly Thr Ala Tyr Val Val Tyr
      50             55             60
Glu Asp Ile Phe Asp Ala Lys Asn Ala Cys Asp His Leu Ser Gly Phe
      65             70             75             80
Asn Val Cys Asn Arg Tyr Leu Val Val Leu Tyr Tyr Asn Ala Asn Arg
      85             90             95
Ala Phe Gln Lys Met Asp Thr Lys Lys Lys Glu Glu Gln Leu Lys Leu
      100            105            110
Leu Lys Glu Lys Tyr Gly Ile Asn Thr Asp Pro Pro Lys
      115            120            125

```

<210> 5277

<211> 612

<212> DNA

<213> Homo sapiens

<400> 5277

```

atctacgact tcatggatga cccgaagccc cacaagaagc tgggcccgca ggcttgctg
60
gtggcgccca tcacggccac ggagctgctc atcgtggtga agtacgaccc ccacacgctc
120
accctgtccc tgcccttcta catctcccag tgctggaccc tcggctccgt cctggcgctc
180
acctggaccg tctggcgctt ctctctgctg gacatcacat tgaggtacaa ggagaccg
240
tggcagaagt ggcagaacaa ggatgaccag ggcagcaccg tcggcaacgg ggaccagcac
300
ccactggggc tggacgaaga cctgctgggg cctgggggtgg ccgagggcga gggagcacca
360
actccaaact gacctgggce gtggctgcct cgtgagcctc ccagagccca ggctccgtg
420
gcctcctcct gtgtgagtc caccaggagc cacgtgcccg gccttgccct caagggtttt
480
tgcttttctc ctgtgcacct ggcgaggctg aaggcgaggg gtggaggagg cccagcaca
540
gcctcatctc catgtgtaca cgtgtgtacg tgtgtatgcg tgtgtgtacg tgtgtatgcg
600
tgtgtgtacg tg
612

```

<210> 5278

<211> 123

<212> PRT

<213> Homo sapiens

```

65          70          75          80
Ser Gly Ile Thr Tyr Leu Gly Ile Lys Ala Asn Asp Thr Gln Glu Phe
          85          90          95
Asn Leu Ser Ala Tyr Phe Glu Arg Ala Ala Asp Phe Ile Asp Gln Ala
          100          105          110
Leu Ala Gln Lys Asn Gly Arg Val Leu Val His Cys Arg Glu Gly Tyr
          115          120          125
Ser Arg Ser Pro Thr Leu Val Ile Ala Tyr Leu Met Met Arg Gln Lys
          130          135          140
Met Asp Val Lys Ser Ala Leu Ser Ile Val Arg Gln Asn Arg Glu Ile
          145          150          155          160
Gly Pro Asn Asp Gly Phe Leu Ala Gln Leu Cys Gln Leu Asn Asp Arg
          165          170          175
Leu Ala Lys Glu Gly Lys Leu Lys Pro
          180          185

```

<210> 5275

<211> 810

<212> DNA

<213> Homo sapiens

<400> 5275

```

nntctcgctc aggctcgggtt ttaccccgga gtctattcga agggggctgc tacgtcagcg
60
cgtctcagcg taagacggcg ctattccgct gtaacagctt ccggcggggtc ctggatgttg
120
atgtcctgca tctaacgcgg tgtgaccccc gaagccgagc gagctccgga ggaatttcag
180
tatctgctac ggtaacttca tcagcccgcc aagatggcga tgcaagcggc caagagggcg
240
aacattcgac ttccacctga agtaaatcgg atattgtata taagaaattt gccatacaaa
300
atcacagctg aagaaatgta tgatatattt gggaaatatg gacctattcg tcaaatcaga
360
gtggggaaca cacctgaaac tagaggaaca gcttatgtgg tctatgagga catctttgat
420
gccaagaatg catgtgatca cctatcggga ttcaatgttt gtaacagata ccttgtggtt
480
ttgtactata atgccaacag ggcatttcag aagatggaca caaagaagaa ggaggaacag
540
ttgaagcttc tcaaggagaa atatggcatc aacacagatc caccaaaata aatgttttct
600
acattttcat ttggactaaa tcccacgaat gacaactacc accttttttt cctttttaat
660
taatactaaa tattgtgatt tcttatttga ggttcaaaat gacctgcttg aaactttgat
720
acatattgga atacattatg ttaataaact tgtagctttt tgtgaaacaa aaaaaaaaag
780
tcgacgcggc cggcaattta gtagtagtag
810

```

<210> 5276

<211> 125

<212> PRT

ttttatgctg ataacttggg atttcttgat agtccttcac ccctgaaacc ccgtatttac
 3540
 ttaacaagat ttagctctta gttcttcaag taaaattaaa gtctcttggtg taagagccaa
 3600
 cacatgcca gctgcggatg ggagctgttc ctggacagcc ttctactgcc tgggaagtga
 3660
 tggaacagga actcaggggtg cccttaccac cteccacagac ctgttccctt tctttgactg
 3720
 acagagcacc atccaggcaa aattagagcg ccaaattggtt ttcttctcaa tcttaaagca
 3780
 gtataccttt ccacaggctc gtctgtgtcc ctgccactct gagttatcca gaaaccacca
 3840
 cctacaaatg aggggactca tctagaagac ctctaaggctc cccttttggc tctgaggggt
 3900
 ctctaataat cccacttgg aattcagcac cgcaaggaaa ttatgggtat gtgagccata
 3960
 atatgatggc cagcaggtgg cgctgccttc caccatggt gatggatggt ttggaaaggg
 4020
 aatgttggtg ccttttgtgc cacaagttaa gatgctactg ttttaaagga aaaaaaaaaa
 4080
 aaaaaagtac tgatcttcaa tatgaagaca tgagcttttc tcgcaggaaa ttttctttt
 4140
 cacagaactg gtgtcaggaa tctactgaagg gctaaccgtg atagtccttg caagtaagtc
 4200
 aaggttttat cctgattgga aatagaagac atttccgggt gagagaacag attcgttgga
 4260
 agcttaactt ttgttgctc ttaacgccac caaattttag ggtaatttga ttatgaaaga
 4320
 gtgaattttt ctggacagaa aaggagagc taccaaattg ttttttctt tttaaaagga
 4380
 agtttaagt ccgttgtatc acaaatcagt gttaaaacac cagaacttta gccaaaataa
 4440
 atgtcttaca ttacaaaggt aaaaaaaaaa aaaaaaaaaa cccaaaatt ttttataccg
 4500
 gaaatttgaa aaaaccccc atttcccccc aacagtgacc cggaacactc ctcattctat
 4560
 taattacacc attctcccat
 4580

<210> 5274

<211> 185

<212> PRT

<213> Homo sapiens

<400> 5274

Met Ser Gly Ser Phe Glu Leu Ser Val Gln Asp Leu Asn Asp Leu Leu
 1 5 10 15
 Ser Asp Gly Ser Gly Cys Tyr Ser Leu Pro Ser Gln Pro Cys Asn Glu
 20 25 30
 Val Thr Pro Arg Ile Tyr Val Gly Asn Ala Ser Val Ala Gln Asp Ile
 35 40 45
 Pro Lys Leu Gln Lys Leu Gly Ile Thr His Val Leu Asn Ala Ala Glu
 50 55 60
 Gly Arg Ser Phe Met His Val Asn Thr Asn Ala Asn Phe Tyr Lys Asp

agtgttgga agcccaagcc actcgtgcta actgcttttt gtctcggttg ctattccaag
1920
aacagaagga ggaagtggc caattacagc gtgtgtgcat ggatgtgtgt ggggggcgtg
1980
cctctcagaa acgcggccag aagacaagca ggaagtga aggtcccagg cacacaccct
2040
gcccatgca ggtggctctt acagctctct ggtgccagca cgggatccct gaagtgactc
2100
agccaggcag acatgagaca tggcggagtg tccaaatgga tcctttattg gtggtagagc
2160
aaaaaaacc aaacacgata aacctttcaa aagactttct aaggatgata ttggaatgca
2220
ccagccctca catgtgtatg cacatttgcc agaataaag agttttgttt taaatacagt
2280
cttgttagga ttttacgtta ttgttattat ggaaagtgat tgtgatgcta tttatcttca
2340
gggtcactct gggcaaagag aaggtcctca gccatgcccc cagcaccttg cacatagggtg
2400
tctgataaaa gttaaagaaa ttaaacactt tttgagcacc aaatatatat agggcattgt
2460
tctgggtgggt gtgtcacgct ccagaaagac tgaatttatg gtaggatcac tcgcaaggcc
2520
ttgtgaagga gtcttaccta aaacaaaaga aatatcaggg acttttggtg actatttaca
2580
actcagtttt acatttaaat tcaggcagtg ttaatatgcc aaggtaggga atgtgccttt
2640
ttcagagttg gccaggagct cctggctggg acacggagag gcagggtgtg gcgtaaggcc
2700
tcactcccgg ctgtgaaggt ctctgatcac acagaagcag ccctgccag cctggtcatt
2760
tgctgtccgc ttttctctgt gaccacagca gccctgaaca accagtatgt gtcttcttct
2820
ccagatagtg aaaaagggtg ccagataaac ccacctaagt gaaatggcca tcctctaaac
2880
tgggtacctc actgcacagc ttctaggtag ccttccaact taatctaact tgagcctcac
2940
agtaaccctg taaagttagt agagcttggt cttgtattgt gacctttttt aaaaaaagg
3000
aactgagggt cagaatgatt aagggcctgg ccccagggt tgtccagctc cataagggtg
3060
agctgggcaa gattttgggt ttgctgtctc ctgaagctgg attctttcat acgatactct
3120
ttctcaagaa gggggctccc tgggatctcc aggtgtactg cacttacct caatccagcc
3180
ccggagaagc aagtgaagag ggtgggtccc tcataggcta gaatgtgcag ctctttctcc
3240
aggtgggatg tagcacccca aagtagagct ttctgtctg ctctggaaa aggctagggg
3300
gctggggctg gggctccct cccatgacca ggcagtggc accccatggg acaggcacag
3360
ctacttacgc gaacacagca ggttggtgtg gctggctaac taggacctct cgaaagtctc
3420
tgtgggggca tgaggagaa aaggccattg ggagaattac tgcctttact ttgggactac
3480

gcagcccttt caaagtaagc gctgaggttg aactcctgtg tgcgttggc cttgatgccc
300
aggatatgta tgccggagtc cttgtagaag ttggcattgg tgttgacgtg catgaaggac
360
ctgccctcag ccgcgttcag cacatgggtg atgcctagtt tctgcagctt ggggatgtcg
420
ggctcgttcg agctctcggg gcaggatctc aacgacctgc tctcggacgg cagcggctgc
480
tacagcctcc cgagccagcc ctgcaacgag gtcaccccg gcgtctacgt gggcaacgcg
540
tctgtggctc aggacatccc caagctgcag aaactaggca tcacccatgt gctgaacgcg
600
gctgagggca ggtccttcat gcacgtcaac accaatgcc aacttctaca ggactccggc
660
atcacatacc tgggcatcaa ggccaacgac acacaggagt tcaacctcag cgcttacttt
720
gaaagggtcg ccgacttcat tgaccaggct ttgggtcaaa agaatggccg ggtgctcgtc
780
cactgccggg aaggttatag ccgctcccca acgctagtta tcgcctacct catgatgcgg
840
cagaagatgg acgtcaagtc tgccctgagc atcgtgaggc agaaccgtga gatcgccccc
900
aacgatggct tccctggcca gctctgccag ctcaatgaca gactagccaa ggaggggaag
960
ttgaaaccct agggcacccc caccgcctct gctcgagagg tccgtggggg aggccgtggg
1020
caaagggtgc ccgagctgcc atgttttaga aacacactgt accctgctcc cagcatcaca
1080
aggcacttgt ctacaagtgt gtcccaacac agtcttgggc cactttcccc accctgggga
1140
gcacataaag aagcttgcca aggggggctg ccttgctccc cagttgtcct gtttctgtaa
1200
cttatgatgt cttttccctg agatgggggc tcagaggggg aaggcctgtg gcctgcatgc
1260
ttcccgatgg ccacggcag gaggtgtgtg gaagtgtgag gcctaagatg ctcacagagg
1320
tccctcatga cctcccttcc ccaactcccg aatcctctct tgagtgtgga cctcaacacc
1380
ttgagcccta gtaaaggaac tatgcaaatg caggccactc tccccaccac gtctgtgccc
1440
cgactgtcc ccacagcctt ccacaccctg tgcataggca gccctctcac gtcttgagg
1500
ccgaagctgg ggtgggggtg tccgtcagtt attagtggat ggagattccc acagcaaggc
1560
tgcatttgaa tgatttcctt aggatgaatg gtccctacac aaagaggcct tgtgggcaaa
1620
cctggagaac cctcctaaat ccatagagtt ttcaaatgt gaatctttgg aagccttgag
1680
ttcagaatct gctgctctgg aatatttccc ttcgatctta tctcagtcac ttcgtttttg
1740
agaagagtga tgccctgggc atgctttttt tttttctttt ttagaaaaca gggagtgtgaa
1800
gtccaacctt tttaaaaacc ccaccatttg gagaattaca agggttttgt cctgaattgt
1860

85 90 95
 Ser Val Glu Leu Val Asp Ile Gly Lys Gln Lys Leu Pro Asp Gly Ser
 100 105 110
 Glu Ile Pro Leu Pro Pro Ile Leu Leu Gly Arg Leu Gly Ser Asp Pro
 115 120 125
 Gln Lys Lys Thr Val Cys Ile Tyr Gly His Leu Asp Val Gln Pro Ala
 130 135 140
 Ala Leu Glu Asp Gly Trp Asp Ser Glu Pro Phe Thr Leu Val Glu Arg
 145 150 155 160
 Asp Gly Lys Leu Tyr Gly Arg Gly Ser Thr Asp Asp Lys Gly Pro Val
 165 170 175
 Ala Gly Trp Ile Asn Ala Leu Glu Ala Tyr Gln Lys Thr Gly Gln Glu
 180 185 190
 Ile Pro Val Asn Val Arg Phe Cys Leu Glu Gly Met Glu Glu Ser Gly
 195 200 205
 Ser Glu Gly Leu Asp Glu Leu Ile Phe Ala Arg Lys Asp Thr Phe Phe
 210 215 220
 Lys Asp Val Asp Tyr Val Cys Ile Ser Asp Asn Tyr Trp Leu Gly Lys
 225 230 235 240
 Lys Lys Pro Cys Ile Thr Tyr Gly Leu Arg Gly Ile Cys Tyr Phe Phe
 245 250 255
 Ile Glu Val Glu Cys Ser Asn Lys Asp Leu His Ser Gly Val Tyr Gly
 260 265 270
 Gly Ser Val His Glu Ala Met Thr Asp Leu Ile Leu Leu Met Gly Ser
 275 280 285
 Leu Val Asp Lys Arg Gly Asn Ile Leu Ile Pro Gly Ile Asn Glu Ala
 290 295 300
 Val Ala Ala Val Thr Glu Glu Glu His Lys Leu Tyr Asp Asp Ile Asp
 305 310 315 320
 Phe Asp Ile Glu Glu Phe Ala Lys Asp Val Gly Ala Gln Ile Leu Leu
 325 330 335
 His Ser His Lys Lys Asp Ile Leu Met His Arg Trp Arg Tyr Pro Ser
 340 345 350
 Leu Ser Leu His Gly Ile Glu Gly Ala Phe Ser Gly Ser Gly Ala Lys
 355 360 365
 Thr Val Ile Pro Lys Lys Val Val Gly Lys Phe Ser Ile Arg Leu Val
 370 375 380
 Pro
 385

<210> 5273

<211> 4580

<212> DNA

<213> Homo sapiens

<400> 5273

ccattggggta ggcgataact agcgttgggg agcggctata accttcccgg cagtggacga
 60
 gcacccggcc tgtaatccca gctacttggg aggctgaggg gggaggctga ggcaggagaa
 120
 tcgcttgaac cggggaggtg gaggttgcgg tgagccaaga tcgcgccatt gctcttcagc
 180
 ctgggcaaca agagtgaac tccatctttc ttttgagcca aagcctgggc aatgaagtcg
 240

agcctggaat gtggcaacgt tacgggagcc tcttctccct caaggacacc ttttcagaat
 180
 ccctcgttgc ttcttgtcca caaacagaaa ctgcgaaaat ggggtggctat ccagagtgtg
 240
 tctgcgtggc cggagaagag aggcgaaatc aggaggatga tggaaagttgc tgctgcagat
 300
 gttaagcagt tgggggggctc tgtggaactg gtggatatcg gaaaacaaaa gctccctgat
 360
 ggctcggaga tcccgtccc tcctattctg ctgcgcaggc tgggctccga cccacagaag
 420
 aagaccgtgt gcatttacgg gcacctggat gtgcagcctg cagccctgga ggacggctgg
 480
 gacagcgagc ccttcaccct ggtggagcga gacggcaagc tgtatgggag aggttcgact
 540
 gatgataagg gcccggtggc cggctggata aacgccctgg aagcgtatca gaaaacaggc
 600
 caggagattc ctgtcaacgt ccgattctgc ctggaaggca tggaggagtc aggctctgag
 660
 ggcctagacg agctgatttt tgcccggaaa gacacattct ttaaggatgt ggactatgtc
 720
 tgcatttctg acaattactg gctgggaaaag aagaagccct gcatcaccta cggcctcagg
 780
 ggcatttgct actttttcat cgaggtggag tgcagcaaca aagacctcca ttctgggggtg
 840
 tacgggggct cgggtgatga ggccatgact gatctcattt tgctgatggg ctctttgggtg
 900
 gacaagaggg ggaacatcct gatccccggc attaacgagg ccgtggccgc cgtcacggaa
 960
 gaggagcaca agctgtacga cgacatcgac ttgacatag aggagtgtgc caaggatgtg
 1020
 ggggcgagga tctctctgca cagccacaag aaagacatcc tcatgcaccg atggcggtac
 1080
 ccgtctctgt cctccatgg catcgaaggc gccttctctg ggtctggggc caagaccgtg
 1140
 attcccaaaa aggtggttgg caagttctcc atcaggctcg tgccg
 1185

<210> 5272

<211> 385

<212> PRT

<213> Homo sapiens

<400> 5272

Met Ala Ala Leu Thr Thr Leu Phe Lys Tyr Ile Asp Glu Asn Gln Asp
 1 5 10 15
 Arg Tyr Ile Lys Pro Val Gln Leu Gln Gln Pro Gln Arg Val Ser Leu
 20 25 30
 Glu Cys Gly Asn Val Thr Gly Ala Ser Ser Pro Ser Arg Thr Pro Phe
 35 40 45
 Gln Asn Pro Ser Leu Leu Leu Val His Lys Gln Lys Leu Ala Lys Trp
 50 55 60
 Val Ala Ile Gln Ser Val Ser Ala Trp Pro Glu Lys Arg Gly Glu Ile
 65 70 75 80
 Arg Arg Met Met Glu Val Ala Ala Ala Asp Val Lys Gln Leu Gly Gly

<400> 5270

```

Met Asn Glu Gln Ser Gln Lys Thr Gln Asn Ile Ser Ser Phe Asp Ser
 1           5           10           15
Glu Leu Phe Leu Glu Glu Leu Asp Glu Leu Pro Pro Leu Ser Pro Met
           20           25           30
Gln Pro Ile Ser Glu Glu Glu Ala Ile Gln Ile Ile Ala Asp Pro Pro
           35           40           45
Leu Pro Pro Ala Ser Phe Thr Leu Arg Asp Tyr Val Asp His Ser Glu
           50           55           60
Thr Leu Gln Lys Leu Val Leu Leu Gly Val Asp Leu Ser Lys Ile Glu
65           70           75           80
Lys His Pro Glu Ala Ala Asn Leu Leu Leu Arg Leu Asp Phe Glu Lys
           85           90           95
Asp Ile Lys Gln Met Leu Leu Phe Leu Lys Asp Val Gly Ile Glu Asp
           100          105          110
Asn Gln Leu Gly Ala Phe Leu Thr Lys Asn His Ala Ile Phe Ser Glu
           115          120          125
Asp Leu Glu Asn Leu Lys Thr Arg Val Ala Tyr Leu His Ser Lys Asn
           130          135          140
Phe Ser Lys Ala Asp Val Ala Gln Met Val Arg Lys Ala Pro Phe Leu
145          150          155          160
Leu Asn Phe Ser Val Glu Arg Leu Asp Asn Arg Leu Gly Phe Phe Gln
           165          170          175
Lys Glu Leu Glu Leu Ser Val Lys Lys Thr Arg Asp Leu Val Val Arg
           180          185          190
Leu Pro Arg Leu Leu Thr Gly Ser Leu Glu Pro Val Lys Glu Asn Met
           195          200          205
Lys Val Tyr Arg Leu Glu Leu Gly Phe Lys His Asn Glu Ile Gln His
           210          215          220
Met Ile Thr Arg Ile Pro Lys Met Leu Thr Ala Asn Lys Met Lys Leu
225          230          235          240
Thr Glu Thr Phe Asp Phe Val His Asn Val Met Ser Ile Pro His His
           245          250          255
Ile Ile Val Lys Phe Pro Gln Val Phe Asn Thr Arg Leu Phe Lys Val
           260          265          270
Lys Glu Arg His Leu Phe Leu Thr Tyr Leu Gly Arg Ala Gln Tyr Asp
           275          280          285
Pro Ala Lys Pro Asn Tyr Ile Ser Leu Asp Lys Leu Val Ser Ile Pro
           290          295          300
Asp Glu Ile Phe Cys Glu Glu Ile Ala Lys Ala Ser Val Gln Asp Phe
305          310          315          320
Glu Lys Phe Leu Lys Thr Leu
           325

```

<210> 5271

<211> 1185

<212> DNA

<213> Homo sapiens

<400> 5271

```

nagatctgcg gtctgggggtc tggttgaaag atggcgggccc tcaactaccct gtttaagtac
60
atagatgaaa atcaggatcg ctacattaag cctgttcaac tgcagcagcc acagagggtg
120

```

275

<210> 5269

<211> 1177

<212> DNA

<213> Homo sapiens

<400> 5269

nngctttctc cagtggggat ttaagactta caggatttcc tcttatggaa tagttcctag
60
tctactagct caagtagtca ggagaataat tctgcccaaa gcagtctgct tccttccatg
120
aatgaacagt cacagaagac acaaaatata tccagctttg attctgagct gtttctagaa
180
gaactggatg aattgcctcc attgtctcca atgcagccaa tttcagagga agaggctatt
240
cagattattg cagaccctcc attgccacca gcttcattca cacttcgaga ctatgtggat
300
cattctgaga ctctgcagaa gttgggttctt ctaggcgtgg atttgtccaa gatagaaaaa
360
catccagaag cagcaaacct ccttctgaga ctggattttg aaaaagacat taagcaaattg
420
cttctgtttc ttaaagatgt gggatatagag gataaccaac tgggagcatt cctgacaaaa
480
aatcatgcaa ttttctctga agaccttgaa aatctgaaga ccagggtggc ttatctgcat
540
tcaaaaaatt tcagtaaagc agatgttgca cagatggtea gaaaagcacc atttttgctg
600
aacttttcag tggaaagact ggataacaga ttgggatttt ttcagaaaga acttgaactt
660
agtgtgaaga agactagaga tctggtagtt cgtctcccaa ggctgctaac tggaagtctg
720
gaaccctgta aagaaaatat gaaggtttat cgtcttgaac ttggttttta acataacgaa
780
attcaacata tgatcaccag aatcccaaag atgttaactg caaataaaat gaaacttacc
840
gagacgtttg attttgtgca caatgtgatg agcattcccc accacatcat tgtcaagttc
900
ccacaggtat ttaatacaag gctgtttaag gtcaaagaaa gacacttggt tcttacctat
960
ttaggaagag cacagtatga tccagcaaaa cctaactaca tctctttgga caaactagta
1020
tctattcctg atgaaatatt ttgtgaagag attgccaaag catcagtaca ggactttgaa
1080
aaattcttaa aaacgcttta gatttttatg tatgttaaaa tgcagtattg taaagtgaat
1140
atatatatga ataaatgaat atatttttaa aaaaaaa
1177

<210> 5270

<211> 327

<212> PRT

<213> Homo sapiens

caccctttca cacctccaaa gctgagtgcc tttgtggatg aagcaaagac gtatgcagcc
 600
 gaatacaccg tgcagaccct gggcatcccc actgatggag gcgatggcac catggctact
 660
 gctgctgctg ctgctactgc tttcccagga tatgctgtcc ctaatgcaac tgcacccgtg
 720
 tctgcagccc agctcaagca agcggtaacc cttggacaag acttagcagc atatacaacc
 780
 tatgaggtct acccaacttt tgcagtgact gcccgagggg atggatatgg caccttctga
 840
 agatgctttt ttaaatttaa gaataagaca cacaaaactc tatta
 885

<210> 5268

<211> 279

<212> PRT

<213> Homo sapiens

<400> 5268

Phe	Gly	Thr	Arg	Gly	Thr	Met	Leu	Gln	Gly	Glu	Tyr	Thr	Tyr	Ser	Leu
1				5					10					15	
Gly	Gln	Val	Tyr	Asp	Pro	Thr	Thr	Thr	Tyr	Leu	Gly	Ala	Pro	Val	Phe
		20						25				30			
Tyr	Ala	Pro	Gln	Thr	Tyr	Ala	Ala	Ile	Pro	Ser	Leu	His	Phe	Pro	Ala
		35					40					45			
Thr	Lys	Gly	His	Leu	Ser	Asn	Arg	Ala	Ile	Ile	Arg	Ala	Pro	Ser	Val
	50					55					60				
Arg	Glu	Ile	Tyr	Met	Asn	Val	Pro	Val	Gly	Ala	Gly	Val	Arg	Gly	
65					70					75				80	
Leu	Gly	Gly	Arg	Gly	Tyr	Leu	Ala	Tyr	Thr	Gly	Leu	Gly	Arg	Gly	Tyr
			85						90					95	
Gln	Val	Lys	Gly	Asp	Lys	Arg	Glu	Asp	Lys	Leu	Tyr	Asp	Ile	Leu	Pro
			100					105					110		
Gly	Met	Glu	Leu	Thr	Pro	Met	Asn	Pro	Val	Thr	Leu	Lys	Pro	Gln	Gly
		115					120					125			
Ile	Lys	Leu	Ala	Pro	Gln	Ile	Leu	Glu	Glu	Ile	Cys	Gln	Lys	Asn	Asn
	130					135					140				
Trp	Gly	Gln	Pro	Val	Tyr	Gln	Leu	His	Ser	Ala	Ile	Gly	Gln	Asp	Gln
145					150					155				160	
Arg	Gln	Leu	Phe	Leu	Tyr	Lys	Ile	Thr	Ile	Pro	Ala	Leu	Ala	Ser	Gln
			165						170					175	
Asn	Pro	Ala	Ile	His	Pro	Phe	Thr	Pro	Pro	Lys	Leu	Ser	Ala	Phe	Val
		180						185					190		
Asp	Glu	Ala	Lys	Thr	Tyr	Ala	Ala	Glu	Tyr	Thr	Leu	Gln	Thr	Leu	Gly
		195					200					205			
Ile	Pro	Thr	Asp	Gly	Gly	Asp	Gly	Thr	Met	Ala	Thr	Ala	Ala	Ala	Ala
	210					215					220				
Ala	Thr	Ala	Phe	Pro	Gly	Tyr	Ala	Val	Pro	Asn	Ala	Thr	Ala	Pro	Val
225					230					235				240	
Ser	Ala	Ala	Gln	Leu	Lys	Gln	Ala	Val	Thr	Leu	Gly	Gln	Asp	Leu	Ala
			245						250				255		
Ala	Tyr	Thr	Thr	Tyr	Glu	Val	Tyr	Pro	Thr	Phe	Ala	Val	Thr	Ala	Arg
		260						265					270		
Gly	Asp	Gly	Tyr	Gly	Thr	Phe									

4438

195 200 205
 Phe Arg Ile His Tyr Gln Ala Tyr Leu Leu Ser Cys Gly Phe Pro Pro
 210 215 220
 Arg Pro Ala His Gly Asp Val Ser Val Thr Asp Leu His Pro Gly Gly
 225 230 235 240
 Thr Ala Thr Phe His Cys Asp Ser Gly Tyr Gln Leu Gln Gly Glu Glu
 245 250 255
 Thr Leu Ile Cys Leu Asn Gly Thr Arg Pro Ser Trp Asn Gly Glu Thr
 260 265 270
 Pro Ser Cys Met Ala Ser Cys Gly Gly Thr Ile His Asn Ala Thr Leu
 275 280 285
 Gly Arg Ile Val Ser Pro Glu Pro Gly Gly Ala Val Gly Pro Asn Leu
 290 295 300
 Thr Cys Arg Trp Val Ile Glu Ala Ala Glu Gly Arg Arg Leu His Leu
 305 310 315 320
 His Phe Glu Arg Val Ser Leu Asp Glu Asp Asn Asp Arg Leu Met Val
 325 330 335
 Arg Ser Gly Gly Ser Pro Leu Ser Pro Val Ile Tyr Asp Ser Asp Met
 340 345 350
 Asp Asp Val Pro Glu Arg Gly Leu Ile Ser Asp Ala Gln Ser Leu Tyr
 355 360 365
 Val Glu Leu Leu Ser Glu Thr Pro Ala Asn Pro Leu Leu Leu Ser Leu
 370 375 380
 Arg Phe Glu Ala Phe Glu Glu Asp Arg Cys Phe Ala Pro Phe Leu Ala
 385 390 395 400
 His Gly Asn Val Thr Thr Thr Asp Pro Glu Tyr Arg Pro Gly Ala Leu
 405 410 415
 Ala Thr Phe Ser Cys Leu Pro Gly Tyr Ala Leu Glu Pro Pro Gly Pro
 420 425 430
 Pro Asn Ala Ile Glu Cys Val Asp Pro Thr Glu Pro His Trp Asn Asp
 435 440 445
 Thr Glu Pro Ala Cys Lys Ala Met Cys Gly Gly Glu Leu Ser Glu Pro
 450 455 460
 Ala Gly Val Val Leu Ser Pro Asp Trp Pro Gln Ser Tyr Ser Pro Gly
 465 470 475 480
 Gln Asp Cys Val Trp Gly Val His Val Gln Glu Glu Lys Arg Ile Leu
 485 490 495
 Leu Gln Val Glu Ile Leu Asn Val Arg Glu Gly Asp Met Leu Thr Leu
 500 505 510
 Phe Asp Gly Asp Gly Pro Ser Ala Arg Val Leu Ala Gln Leu Arg Gly
 515 520 525
 Pro Gln Pro Arg Arg Arg Leu Leu Ser Ser Gly Pro Asp Leu Thr Leu
 530 535 540
 Gln Phe Gln Ala Pro Pro Gly Pro Pro Asn Pro Gly Leu Gly Gln Gly
 545 550 555 560
 Phe Val Leu His Phe Lys Glu Val Pro Arg Asn Asp Thr Cys Pro Glu
 565 570 575
 Leu Pro Pro Pro Glu Trp Gly Trp Arg Thr Ala Ser His Gly Asp Leu
 580 585 590
 Ile Arg Gly Thr Val Leu Thr Tyr Gln Cys Glu Pro Gly Tyr Glu Leu
 595 600 605
 Leu Gly Ser Asp Ile Leu Thr Cys Gln Trp Asp Leu Ser Trp Ser Ala
 610 615 620
 Ala Pro Pro Ala Cys Gln Lys Ile Met Thr Cys Ala Asp Pro Gly Glu

gagtcggact tcagcaaccc gctgtatgaa gctggggata cgcgggagta tgaagtttcc
 2640
 atctgaaccc caagactaca gctgcaggac ccaggacgcc cctccctcc tcattcgggc
 2700
 agagggaat acgggacccg gtctctgect cctggctgcc ctctccctg gctgtgtaaa
 2760
 tagtctccct atcccacgag ggggctttga tggccctgga gatcctacag taaataaacc
 2820
 agcatcctgc cgcccaaagc cgctcttct cagttgcaa acgaggggcc tgccccccgc
 2880
 cctaccggct tttggattct gggaggggaa ctctgcctcc ctgcaaactc tgcagcccct
 2940
 cctgccagg gcacccctca aggactgccc ccgatagctc tactgttccc ttggccacga
 3000
 aggtgcccc ctcccagatg ccttggcctc aggcctgact ccggccagga gggtcagaag
 3060
 aaggacaaag gggagagctg ggacaaggcc ttgccccctt cctgccatct ccccaaccca
 3120
 cagtctctcc acctttgctt ctgaattctt gtttttgagc aataaacaga aaatcgccac
 3180
 ttgtaaaaaa aaaaaaaaaa aaa
 3203

<210> 5266

<211> 853

<212> PRT

<213> Homo sapiens

<400> 5266

Met Gly Thr Pro Arg Ala Gln His Pro Pro Pro Pro Gln Leu Leu Phe
 1 5 10 15
 Leu Ile Leu Leu Ser Cys Pro Trp Ile Gln Gly Leu Pro Leu Lys Glu
 20 25 30
 Glu Glu Ile Leu Pro Glu Pro Gly Ser Glu Thr Pro Thr Val Ala Ser
 35 40 45
 Glu Ala Leu Ala Glu Leu Leu His Gly Ala Leu Leu Arg Arg Gly Pro
 50 55 60
 Glu Met Gly Tyr Leu Pro Gly Pro Pro Leu Gly Pro Glu Gly Gly Glu
 65 70 75 80
 Glu Glu Thr Thr Thr Thr Ile Ile Thr Thr Thr Thr Val Thr Thr Thr
 85 90 95
 Val Thr Ser Pro Val Leu Cys Asn Asn Asn Ile Ser Glu Gly Glu Gly
 100 105 110
 Tyr Val Glu Ser Pro Asp Leu Gly Ser Pro Val Ser Arg Thr Leu Gly
 115 120 125
 Leu Leu Asp Cys Thr Tyr Ser Ile His Val Tyr Pro Gly Tyr Gly Ile
 130 135 140
 Glu Ile Gln Val Gln Thr Leu Asn Leu Ser Gln Glu Glu Glu Leu Leu
 145 150 155 160
 Val Leu Ala Gly Gly Gly Ser Pro Gly Leu Ala Pro Arg Leu Leu Ala
 165 170 175
 Asn Ser Ser Met Leu Gly Glu Gly Gln Val Leu Arg Ser Pro Thr Asn
 180 185 190
 Arg Leu Leu Leu His Phe Gln Ser Pro Arg Val Pro Arg Gly Gly Gly

tccccagagc ctgggggagc cgtagggccc aacctcacct gccgttgggt cattgaagca
1020
gctgaggggc gccggctgca cctgcacttt gaaagggctc cgctggatga ggacaatgac
1080
cggctgatgg tgcgctcagg gggcagcccc ctatcccccg tgatctatga ttcggacatg
1140
gacgatgtcc ccgagcgggg tctcatcagt gacgcccagt ccctctacgt ggagctgctg
1200
tcagagacac ctgccaatcc cctgctgtta agccttcgat ttgaagcctt tgaggaggat
1260
cgctgcttcg ccccttctc ggacatgga aatgtcacta ccacggacce tgagtatcg
1320
ccaggggcac tggcaacctt ctctgctc ccaggatatg ccctggagcc ccctgggccc
1380
cccaatgcc a tgaatgtgt ggatcccaca gaacccact ggaacgacac agagccggcc
1440
tgcaagcca tgtgtggagg ggagctgtcg gaaccagctg gcgtggctct ctctcccgac
1500
tggccccaga gctatagccc gggccaagac tgcgtgtggg gcgtgcacgt ccaggaagag
1560
aagcgcatct tgcctcaagt tgagatattg aatgtgcggg aaggggacat gctgacgctg
1620
ttcgacgggg acggtcccag cgcccgagtc ttggcccagc tgcggggacc tcagccgcgc
1680
cgccgccttc tctcctctgg gcccgacctc aactgcagt ttcaggcacc gcccgggccc
1740
ccaaatccag gcctgggcca gggttcgta ttgcacttca aagaggtccc gaggaacgac
1800
acgtgccccg agctgccacc tccggagtgg ggctggagaa cggcatccca cggggacctg
1860
atccggggca cgggtgtcac ctaccagtgc gagcctggct acgagctgct aggctccgac
1920
attctcactt gccagtggga cctgtcttgg agcgccgcgc cgcccgctg ccaaaagatc
1980
atgacttgtg ctgacctgg cgagattgcc aacgggcacc gcaccgcctc ggacgccggc
2040
ttccccgttg gctcccacgt ccagtaccgc tgctgccag ggtacagcct cgagggggca
2100
gccatgctca cctgctacag ccgggacaca ggacaccca agtggagcga tagggctccc
2160
aaatgcgct tgaagtacga gccgtgcctg aaccggggg ttcccgagaa tggctaccag
2220
acgctgtaca agcaccacta ccaggcgggc gagtctctgc gcttctctg ctatgagggc
2280
tttgagctta tcggcgaggt caccatcacc tgtgtgccc gccaccctc ccagtggacc
2340
agccagcccc cactctgcaa agttgcctat gaggagctcc tggacaaccg aaaactggaa
2400
gtgaccaga ccacagatcc atcacggcag ctggaagggg ggaacctggc cctggccatc
2460
ctgctgcctc taggcttggg cattgtcctc ggagtgggc tttacatcta ctacaccaag
2520
cttcagggaa agtccctttt cggcttctcg ggctccact cctacagccc catcaccgtg
2580

Met Asp Leu Ile Asn Arg Ala Thr Met Ser Glu Trp Lys Leu Gln Ser
 1 5 10 15
 Lys Ile Gln Ile Ser His Ser Trp Glu Glu Gly Leu Lys Leu Val Lys
 20 25 30
 Trp His Phe Asn Ile Asn Gln Lys Arg Phe Ser Lys Ala Gln Pro Thr
 35 40 45
 Cys Phe Leu Leu Ile Leu Pro Pro Cys Gln Lys Ile Met Cys Ile Tyr
 50 55 60
 Phe Gln Leu Leu Leu Met Glu Thr Thr Ala Met Leu Asp Leu Leu Val
 65 70 75 80
 Ile Arg Gln Leu Lys Ser Ala Leu Ser Gln Thr Leu Leu Cys His Leu
 85 90 95
 Leu Ile Leu Val Leu Ile Cys Ser Arg
 100 105

<210> 5265

<211> 3203

<212> DNA

<213> Homo sapiens

<400> 5265

cgcccgggca ggtcggagac ggaggaaagg tggcagccag attacttaga gaggcacaga
 60
 ggagagagat cggggtgagt cgccatgggg actcccaggg cccagcaccc gccgcctccc
 120
 cagctgctgt tcctaattct gctgagctgt ccctggatcc agggctctgcc cctgaaggag
 180
 gaggagatat tgccagagcc tggaagttag acccccacgg tggcctctga ggccctggct
 240
 gaactgcttc atggggccct gctgaggagg ggcccagaga tgggctacct gccagggcct
 300
 ccccttgggc ctgagggagg agaggaggag acgacgacca ccatcatcac cagcacaact
 360
 gttaccacta cggtgaccag ccagttctg tgtaataaca acatctccga gggcgaaggg
 420
 tatgtggagt ctccagatct ggggagcccc gtcagccgca ccctggggct cctggactgc
 480
 acttacagca tccatgtcta ccctggctac ggcattgaga tccaggtgca gacgctgaac
 540
 ctgtcacagg aagaggagct cctggtgctg gctggtgggg gatccccagg cctggccccc
 600
 cgactcctgg ccaactcatc catgcttggga gaaggacaag tccttcggag cccaaccaac
 660
 cggctgcttc tgcaattcca gagcccacgg gtcccaaggg gcggtggctt caggatccac
 720
 tatcaggcct acctcctgag ctgtggcttc cctccccggc cggcccatgg ggacgtgagt
 780
 gtgacggacc tgcacctggt gggcactgcc acctttcact gtgattcggg ctaccagctg
 840
 caggagagg agaccctcat ctgcctcaat ggcacccggc catcctggaa cggtgaaacc
 900
 cccagctgca tggcatcctg tgggtggcacc atccacaatg ccaccctggg ccgcatcgtg
 960

Ile Gly Met Asp Pro Ser Asp Ile Tyr Ala Val Ile Gln Ile Pro Gly
 70 75 80
 Ser Arg Glu Phe Asp Val Ser Phe Arg Ser Ala Glu Lys Leu Ala Leu
 85 90 95
 Phe Leu Arg Val Tyr Glu Glu Lys Arg Glu Gln Glu Asp Cys Trp Glu
 100 105 110
 Asn Phe Val Val Leu Gly Arg Ser Lys Ser Ser Leu Lys Thr Leu Phe
 115 120 125
 Ile Leu Phe Arg Asn Glu Thr Val Asp Val Glu Asp Ile Val Thr Trp
 130 135 140
 Leu Lys Arg His Cys Asp Val Leu Ala Val Pro Val Lys Val Thr Asp
 145 150 155 160
 Arg Phe Gly Ile Trp Thr Gly Glu Tyr Lys Cys Glu Ile Glu Leu Arg
 165 170 175
 Gln Gly Glu Gly Gly Val Arg His Leu Pro Gly Ala Phe Phe Leu Gly
 180 185 190
 Ala Glu Arg Gly Tyr Ser Trp Tyr Lys Gly Gln Pro Lys Thr Cys Phe
 195 200 205
 Lys Cys Gly Ser Arg Thr His Met Ser Gly Ser Cys Thr Gln Asp Arg
 210 215 220
 Cys Phe Arg Cys Gly Glu Glu Gly His Leu Ser Pro Tyr Cys Arg Lys
 225 230 235 240
 Gly Ile Val Cys Asn Leu Cys Gly Lys Arg Gly His Ala Phe Ala Gln
 245 250 255
 Cys Pro Lys Ala Val His Asn Ser Val Ala Ala Gln Leu Thr Gly Val
 260 265 270
 Ala Gly His
 275

<210> 5263

<211> 319

<212> DNA

<213> Homo sapiens

<400> 5263

tctagaacaa atgagaacca gtatcagaag gtgacacagg agagtttgtg acagtgccga
 60

tttcagctga cgaattacca gaagatccag cattgctgtc gtttccatca aaagtagctg
 120

gaagtagata cacattatct tctgacaggg gggaagtatc agaagaaagc atgttggttg
 180

tgccttgga aatctttttt ggttgatatt gaaatgccat ttcaccagtt tcaagccttc
 240

ttccaagag tgacttatct gtatcttact ttgtagcttc cattcagaca ttgttgctct
 300

atttattaaa tccatggct
 319

<210> 5264

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5264

gtgtttgctg aattgaaaac attgttgact gtggcttcta tcagagtgtc taccttttgc
 1320
 agctcttccc ctccctcatt taatttgctg cttttaatct acgtggctcg agaatttgctg
 1380
 aaaccagtgt tgtagaagt gtatataatc tgaatcaata agctctgaat ggtggccaag
 1440
 ggctctctct atggcacaaa gatgcatgga cttcatgaca gctcttttgg tggctcagaa
 1500
 gccatttttt atagaatcat ggaatctaga atattcctgc tggaaagaac ctgagagtgtg
 1560
 gtttggacca attccttggg tttccagcag atgaaacagg cccaaagagg ttaaagtact
 1620
 gggtgaaaat cacatagctg tctgggtgcca gagccagcct atagtagagt cccctgaccc
 1680
 caagcccggt gctcattcca ctacctctca cacttcacaa caatttcctc aacacttgag
 1740
 ggcccagaaa gtctgatctc tccagaatga tcagcccaga ggaatgctga gaaatcacct
 1800
 ggaggaggga gcagaaagag aagggttttta aggaggggct tctgaatact tgggagatac
 1860
 ggaacggacc aaggaccaca ctccaggggtg cattcggttg tccctggggc accacttctg
 1920
 gattacagtg tgccaggtcc tttggaggcc ctacccttc cccattcatt gccaccagt
 1980
 agaaatgggg gtgccctgt gtaaagaaac ctaccaaagg tttacatttg caccttagcc
 2040
 tcaatagcta cgaaccctag agaagcagct agctggagct catgtgcaac tctgattct
 2100
 caggagaaaag atggatttta acccaaaatt atgagtgagc tgtaactct aaaatgtact
 2160
 tgggagatag gccaaagcag aggtcatggg ccaactaagt gttatccagt agaaaagaca
 2220
 gtacactgct tttcttttag tgtttgcttt tcctttgcta tatgttttgc tatttcttg
 2280
 tggcttagaa tgtaaaattg attgttaaaa gttttgttct gaataaatat ttatcttttg
 2340
 tattgccaaa aaacacttga gggcccagaa agtctgatct ctccagaatg atca
 2394

<210> 5262

<211> 275

<212> PRT

<213> Homo sapiens

<400> 5262

Xaa	Ala	Ala	Met	Ala	Thr	Pro	Ala	Arg	Pro	Gly	Glu	Ala	Glu	Asp	Ala
1			5					10					15		
Ala	Glu	Arg	Pro	Leu	Gln	Asp	Glu	Pro	Ala	Ala	Ala	Ala	Ala	Gly	Pro
		20					25				30				
Gly	Lys	Gly	Arg	Phe	Leu	Val	Arg	Ile	Cys	Phe	Gln	Gly	Asp	Glu	Gly
	35					40					45				
Ala	Cys	Pro	Thr	Arg	Asp	Phe	Val	Val	Gly	Ala	Leu	Ile	Leu	Arg	Ser
	50					55					60				

50 55 60
 Glu Ile Phe Thr Asp Asn Gln Ile Leu Leu Lys Met Ile Ser His Met
 65 70 75 80
 Thr Ser Leu

<210> 5261

<211> 2394

<212> DNA

<213> Homo sapiens

<400> 5261

nccggccgccca tggcgacccc ggccaggccc ggcgaggccg aggacgcggc cgagcggccc
 60
 ctccaggatg agccggcggc ggccggcgga ggcccgggca agggtcgctt cctcgtccgc
 120
 atctgtttcc agggagacga gggcgccctgc ccgaccggg acttcgtggt aggagcgctt
 180
 atcctgcgct ccacggcat ggacccgagc gacatctac cggtcatcca gatcccgggc
 240
 agccgcgaat tcgacgtgag cttccgctca gcgagagaagc tggccctggt cctacgcgtc
 300
 tacgaggaga agcgggagca ggaggactgc tgggagaact ttgtggtgct ggggcggagc
 360
 aagtccagct tgaagacgt cttcatcctc ttccggaacg agacggtgga cgtggaggac
 420
 attgtgactt ggctcaagcg ccactgcgac gtgctggccg tgccggtgaa agtgaccgac
 480
 aggttttggga tctggaccgg ggagtacaaa tgcgagatcg agctgcgcca gggggagggc
 540
 ggggtcaggc acttgccagg ggccttcttc ctgggggccc agaggggcta cagctggtac
 600
 aaggggcagc ccaagacatg ctttaaagt gtgtcccgga cccacatgag cggcagctgc
 660
 acgcaggaca ggtgcttcag gtgcggggag gaggggcacc tgagccctta ctgccggaag
 720
 ggcacgtgt gcaacctctg tggcaagcga ggacacgct ttgccagtg tcccaaagca
 780
 gtgcacaatt ccgtggcagc tcagctaacc ggcgtggccg ggcactaaac accgcctgc
 840
 ctgccagggt gaacacacag ccagcttctc cctcttaagt gccaaaactt ttttttaaac
 900
 cattttttat cgtttttgaa ggagatcttt ttaaaacctt caagagacat ctctctatgc
 960
 cttcttaaac cgagtttact ccatttcagc ctgttctgaa ttggtgactc tgtcaccaat
 1020
 aacgactgcg gagaactgta gcgtgcagat gtgttgcccc tcccttttaa aattttattt
 1080
 tcgtttttct attgggtatt tgttttgttt cttgtacttt ttctctctct ccttgcccc
 1140
 ctcgccccct ccccgcccca taccttttct tccctggat tttcaccctt tgggctgcct
 1200
 tgctcatctt tatgccccag cactaggtac ggggccaac acgtggtagg cactccatca
 1260


```

      210              215              220
Lys Leu Ser Asp Arg Leu Lys Ser Leu Gly Ala Glu His Val Ile Thr
225              230              235              240
Glu Glu Glu Leu Arg Arg Pro Glu Met Lys Asn Phe Phe Lys Asp Met
      245              250              255
Pro Gln Pro Arg Leu Ala Leu Asn Cys Val Gly Gly Lys Ser Ser Thr
      260              265              270
Glu Leu Leu Arg Gln Leu Ala Arg Gly Gly Thr Met Val Thr Tyr Gly
      275              280              285
Gly Met Ala Lys Gln Pro Val Val Ala Ser Val Ser Leu Leu Ile Phe
      290              295              300
Lys Asp Leu Lys Leu Arg Gly Phe Trp Leu Ser Gln Trp Lys Lys Asp
305              310              315              320
His Ser Pro Asp Gln Phe Lys Glu Leu Ile Leu Thr Leu Cys Asp Leu
      325              330              335
Ile Arg Arg Gly Gln Leu Thr Ala Pro Ala Cys Ser Gln Val Pro Leu
      340              345              350
Gln Asp Tyr Gln Ser Ala Leu Glu Ala Ser Met Lys Pro Phe Ile Ser
      355              360              365
Ser Lys Gln Ile Leu Thr Met
      370              375

```

<210> 5259

<211> 306

<212> DNA

<213> Homo sapiens

<400> 5259

```

ctgaattgct gtgagggcag aacacccaag gagacaatag aaaatttggt gcacagaatg
60
actgaagaga agacgctgac tgctgagggt ttggtaaaac tctccaggc tgtgaagacg
120
actttcccaa acctgggcct tctgctagag aagttgcaga aatcagccac ttgccaagc
180
accacagtcc aaccaagccc tgatgattat gggactgagc tattgagacg ctatcatgaa
240
aacctctctg agattttcac agacaaccag attttattaa agatgatctc acacatgaca
300
agttta
306

```

<210> 5260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 5260

```

Met Thr Glu Glu Lys Thr Leu Thr Ala Glu Gly Leu Val Lys Leu Leu
1              5              10              15
Gln Ala Val Lys Thr Thr Phe Pro Asn Leu Gly Leu Leu Leu Glu Lys
      20              25              30
Leu Gln Lys Ser Ala Thr Leu Pro Ser Thr Thr Val Gln Pro Ser Pro
      35              40              45
Asp Asp Tyr Gly Thr Glu Leu Leu Arg Arg Tyr His Glu Asn Leu Ser

```

ttctttaagg acatgccccca gccacggctt gctctcaact gtgttggtgg gaaaagctcc
 840
 acagagctgc tgcggcagtt agcgcggtga ggaacctatgg ggggatggcc
 900
 aagcagccccg tcgtagcctc tgtgagcctg ctcattttta aggatctcaa acttcgagggc
 960
 ttttggttgt cccagtggaa gaaggatcac agtccagacc agttcaagga gctgaccc
 1020
 acactgtgcg atctcatccg ccgaggccag ctcacagccc ctgcctgctc ccaggtcccg
 1080
 ctgcaggact accagtctgc cttggaagcc tccatgaagc cttcatatc ttcaaagcag
 1140
 attctcacca tgtgatcatc ccaaaagagc tggagtgaaca tgggagggga ggcggatctg
 1200
 aggggctggg tgcaggcccc tcagttgggg ctcccacctt cccagacta ctgttctct
 1260
 cactgctct tctattagg aggatggtga agccagccac ggttttcccc agggccagcc
 1320
 ttaaggatc taataaagtc tgaactctcc cttccaaaaa aaaaaa
 1366

<210> 5258

<211> 375

<212> PRT

<213> Homo sapiens

<400> 5258

Met	Trp	Val	Cys	Ser	Thr	Leu	Trp	Arg	Val	Arg	Thr	Pro	Pro	Gly	Ser
1				5					10					15	
Gly	Gly	Gly	Leu	Leu	Pro	Ala	Ser	Gly	Cys	His	Gly	Pro	Ala	Ala	Ser
			20					25					30		
Ser	Tyr	Ser	Ala	Ser	Ala	Glu	Pro	Ala	Arg	Val	Arg	Gly	Leu	Val	Tyr
		35				40						45			
Gly	His	His	Gly	Asp	Pro	Ala	Lys	Val	Val	Glu	Leu	Lys	Asn	Leu	Glu
	50				55					60					
Leu	Ala	Ala	Val	Arg	Gly	Ser	Asp	Val	Arg	Val	Lys	Met	Leu	Ala	Ala
65				70					75					80	
Pro	Ile	Asn	Pro	Ser	Asp	Ile	Asn	Met	Ile	Gln	Gly	Asn	Tyr	Gly	Leu
			85					90						95	
Leu	Pro	Glu	Leu	Pro	Ala	Val	Gly	Gly	Asn	Glu	Gly	Val	Ala	Gln	Val
		100					105						110		
Val	Ala	Val	Gly	Ser	Asn	Val	Thr	Gly	Leu	Lys	Pro	Gly	Asp	Trp	Val
	115					120						125			
Ile	Pro	Ala	Asn	Ala	Gly	Leu	Asp	Ser	Gly	Thr	Trp	Arg	Thr	Glu	Ala
	130				135						140				
Val	Phe	Ser	Glu	Glu	Ala	Leu	Ile	Gln	Val	Pro	Ser	Asp	Ile	Pro	Leu
145				150					155					160	
Gln	Ser	Ala	Ala	Thr	Leu	Gly	Val	Asn	Pro	Cys	Thr	Ala	Tyr	Arg	Met
			165				170						175		
Leu	Met	Asp	Phe	Glu	Gln	Leu	Gln	Pro	Gly	Asp	Ser	Val	Ile	Gln	Asn
		180					185					190			
Ala	Ser	Asn	Ser	Gly	Val	Gly	Gln	Ala	Val	Ile	Gln	Ile	Ala	Ala	Ala
	195					200						205			
Leu	Gly	Leu	Arg	Thr	Ile	Asn	Val	Val	Arg	Asp	Arg	Pro	Asp	Ile	Gln

aagctcttta aaaaaaaaaa aaaaaaaaaa
1410

<210> 5256
<211> 95
<212> PRT
<213> Homo sapiens

<400> 5256
Met Val Glu Gly Val Cys Gly Glu Gly Ser Pro Gly Pro Gly Cys Asn
1 5 10 15
Leu His Gly Cys Trp Ile Pro Pro His Pro Thr Ser Ala Trp Pro Pro
20 25 30
Pro Pro Ser Pro Val Gly Lys Leu Phe Pro Gly Thr Thr Pro Leu Pro
35 40 45
Ala Ser Pro His Phe Thr Ala Ser Ser Ile Pro Leu Pro Pro Ser Arg
50 55 60
Arg Ile Val Pro Arg Ala Val Phe Leu Gln Gly Val Arg Gly Ile Thr
65 70 75 80
His Ser Trp Arg Leu Ala Arg Arg Gln Ser Glu Ala Arg Asp Thr
85 90 95

<210> 5257
<211> 1366
<212> DNA
<213> Homo sapiens

<400> 5257
ncaggctctg tggtggttg agcgagcatg tgggtctgca gtacctgtg gcgggtgcga
60
accccgcccg gcagtggcgg gggcctgtc ccagcttctg gctgtcacgg acctgccgac
120
tcctcctact ccgcatccgc cgagcctgcc cgggtccgcg gccttgtcta tgggcaccac
180
gggatccag ccaaggtcgt cgaactcaag aacctggagc tagctgtgt gagaggatca
240
gatgtccgtg tgaagatgct ggcgccct atcaatccat ctgacataaa tatgatccaa
300
ggaaactacg gactccttcc tgaactgcct gctgttgag ggaacgaagg tgtgacacg
360
gtggtagcgg tgggcagcaa tgtgaccggg ctgaagccag gagactgggt gattccagca
420
aatgctggtt tagactcagg aacctggcgg accgaggctg tgttcagcga ggaagcactg
480
atccaagttc cgagtgcacat ccctcttcag agcgctgcca ccctgggtgt caatccctgc
540
acagcctaca ggatgttgat ggacttcgag caactgcagc caggggattc tgtcatccag
600
aatgcatcca acagcggagt ggggcaagca gtcacccaga tcgccgcagc cctgggccta
660
agaacatca atgtggtccg agacagacct gatatccaga agctgagtga cagactgaag
720
agtctggggg ctgagcatgt catcacagaa gaggagctaa gaagggccga aatgaaaaac
780

50

55

<210> 5255

<211> 1410

<212> DNA

<213> Homo sapiens

<400> 5255

nncctgcctc cctcaggcac cagatccagt gtcctagtga aacgctggat cctagatccc
60
caaccccaga tccccatgcc tcgagccctg gatctccaag ctgagctgct ggattctgga
120
tgtcaacaaa cctcaccact ggatcctgac aaccacaatg cctggatcct ggggccccca
180
tcaactggatc ccagatcccc tcaactccacc cactggatcc ctgcattggg ttttggtttt
240
ttgttttttt ttaacctcga cactgggtct cagatccctc tgctgactgc cagatccctg
300
catttcaagc actacgcctt ccacccccag gcactggatc ccagattccc aagccttcac
360
ccaccagatt ctggctccta aaacaagtgc gggggcccca gtggcacagc aagtggatcc
420
tggcaactgc agctgctgga ttccagattc tgggtcccca atccctctgc ccagtccctc
480
aatgttgaaa cctcatctct tgaaggcaga tctgatatt ccaaggcact gaatcccaag
540
ccctgaatcc cgggtttctg atctgaatct tccaggcgcc ggggtcccaa tgttcaggcc
600
ccaagtctag atcctggcag ccagtcaca gagtatccca cacacactgg tgcccagagc
660
cggcttctca tgacatgaaa ttgcatggtc gagggagtct gtggggaagg aagcccagg
720
cctggctgca acctgcacgg atgctggatt cccctccacc ccacctctgc atggccaccc
780
cctcccagcc ctgtggggaa actgttcctt ggaaccactc cactccctgc atccccacac
840
ttcacagcat cttccatccc cctcccacct tctaggcgaa tagtccccag agctgtgttc
900
ctccaagggg tccgaggaat cactcactcc tggaggctgg caaggagaca gtctgaggcc
960
agggacacat gaagggatgt cccaccccca gcactatcag ggcctcccca ggcttcaga
1020
gttgaaagcc aggagaaaat cggcaaagac caccctccc taaaccaag cacccaatga
1080
tgcaaaaaac aaaaacaaaa aaaaccacca aatccccaaa ttcattccag atctattttt
1140
ctaccagaga gaggagcaaa gtccctctcc cctgcgccct tacattctgc acttcatagt
1200
tggattctga gcttaggatc atctggagac cccatggagg gacttggaaa ggggaactgg
1260
gatttgggga ggggctggag gacttccgca cgcttcacc tccttcgacc tccactgcgc
1320
cccacctccc tgcctgtgtg tgttatttca aaggaaaaga acaaaaggaa taaattttct
1380

100 105 110
 Gly Arg Ala Ser Leu Gly Leu Asn Ser Gln Pro Gln
 115 120

<210> 5253
 <211> 898
 <212> DNA
 <213> Homo sapiens

<400> 5253
 ngaatatcca tgcagcgatc ctcaaggaca aactctgctg ctttttctct ttgtggattt
 60
 ccacagtgca tttccagtcc agcaaatgga aatctgggga gtctatactt tgctcacaac
 120
 tcattctcaat gccatccttg tggagagcca cagtgtagtg caaggttcca tccaattcac
 180
 tgtggacaag gtcttgagc aacatcacca ggctgccaag gctcagcaga aactacaggc
 240
 ctactctca gtggctgtga actccatcat gagtattctg actggaagca ctaggagcag
 300
 cttccgaaag atgtgtctcc agacccttca agcagctgac acacaagagt tcaggaccaa
 360
 actgcacaaa gtatttctg agatcaccca acaccaattt cttcaccact gctcatgtga
 420
 ggtgaagcag cagctaacct tagaaaaaaa ggactcagcc cagggcactg aggacgcacc
 480
 tgataacagc agcctggagc tcctagcaga taccagcggg caagcagaaa acaagaggct
 540
 caagaggggc agccccgc tagaggagat ggcagctctg cgctctgcca gggccccgag
 600
 cccgtcagag gccgccccgc gccgccccga agccaccgcg gccccctca ctcttagagg
 660
 aaggaggcac cgcgaggctc acggcagggc cctggcgccg ggcagggcga gctcgggaag
 720
 ccgcctggag gacgtgctgt ggctgcagga ggtctccaac ctgtcagagt ggctgagtc
 780
 cagccctggg cctgagccg ggtccccttc cgcaagcgc caccgatccg gaggctgcgg
 840
 gcagccgtta tcccgtggtt taataaagct gccgcgcgct caaaaaaaaa aaaaaaaaa
 898

<210> 5254
 <211> 56
 <212> PRT
 <213> Homo sapiens

<400> 5254
 Gln Gln Pro Gly Ala Pro Ser Arg Tyr Gln Arg Ala Ser Arg Lys Gln
 1 5 10 15
 Glu Ala Gln Glu Gly Gln Pro Pro His Arg Gly Asp Ala Ser Ser Ala
 20 25 30
 Leu Cys Gln Gly Pro Glu Pro Val Arg Gly Arg Pro Ala Pro Pro Gly
 35 40 45
 Ser His Arg Gly Pro Pro His Ser

```

      115      120      125
Cys Tyr Val Thr Phe Ile Cys Asn Ile Phe Asp Tyr Leu Arg Val Asn
      130      135      140
Asn Met Pro Met Met Ala Leu Val Asn Pro Val Tyr Asp Cys Leu Phe
145      150      155      160
Arg Leu Ala Gln Pro Asp Ser Leu Ser Lys Glu Glu Glu Val Asp Cys
      165      170      175
Leu Val Leu Gln Leu His Arg Val Gly Glu Gln Leu Glu Lys Met Asn
      180      185      190
Gly Gln Arg Met Asp Glu Leu Phe Val Leu Ile Arg Asp Gly Phe Leu
      195      200      205
Leu Pro Thr Gly Leu Ser Ser Leu Ala
      210      215

```

<210> 5251
 <211> 372
 <212> DNA
 <213> Homo sapiens

```

<400> 5251
atgaacaggc gtgttatatc tgctaaccga tatctagggg gcacctccaa cggctatgcc
60
caccacagcg ggacggcact tcattatgac gatgtcccgt gcatcaacgg ctcgggggaa
120
ccggaagacg gctttcctgc tttctgcagc agaagcttgg gagaagaagg ggcttttgaa
180
aaccacaggc tgtacgataa ctggcgcct cgcacatct ttgccgcta ctctcctgct
240
gacagaaagg cctctaggct gtctgctgac aagctgtcct ctaaccatta caaataccct
300
gcctctgctc agtctgtcac taatacctct tctgtgggga gggcgtctct cgggctcaac
360
tcgcagcctc ag
372

```

<210> 5252
 <211> 124
 <212> PRT
 <213> Homo sapiens

```

<400> 5252
Met Asn Arg Arg Val Ile Ser Ala Asn Pro Tyr Leu Gly Gly Thr Ser
 1      5      10      15
Asn Gly Tyr Ala His Pro Ser Gly Thr Ala Leu His Tyr Asp Asp Val
      20      25      30
Pro Cys Ile Asn Gly Ser Gly Glu Pro Glu Asp Gly Phe Pro Ala Phe
      35      40      45
Cys Ser Arg Ser Leu Gly Glu Glu Gly Ala Phe Glu Asn Pro Gly Leu
      50      55      60
Tyr Asp Asn Trp Pro Pro Pro His Ile Phe Ala Arg Tyr Ser Pro Ala
      65      70      75      80
Asp Arg Lys Ala Ser Arg Leu Ser Ala Asp Lys Leu Ser Ser Asn His
      85      90      95
Tyr Lys Tyr Pro Ala Ser Ala Gln Ser Val Thr Asn Thr Ser Ser Val

```

165 170 175
 Asp Arg Glu Glu Met Ser Ile Met Thr
 180 185

<210> 5249
 <211> 653
 <212> DNA
 <213> Homo sapiens

<400> 5249
 nnacgcgtgc gcgccaccgg ccgggcaggt gctgtcctta ttcccagccc agtcaagagc
 60
 taccggggct ggctagtcac gggggagccc agtagagagg agtataaaat ccagtccttt
 120
 gatgcagaga cccagcagct gctgaagaca gcactcaaag atccgggtgc tgtggacttg
 180
 gagaaaagtg ccaatgtgat tgtggaccat tctctgcagg actgtgtgtt cagcaaggaa
 240
 gcaggacgca tgtgctacgc catcattcag gcagagagta aacaagcagg ccagagtgtc
 300
 ttccgacgtg gactcctcaa ccggctgcag caggagtacc aggtcggga gcagctgcga
 360
 gcacgctccc tgcagggtcg ggtctgctat gtcaccttta tctgcaacat ctttgactac
 420
 ctgagggtga acaacatgcc catgatggcc ctggtgaacc ctgtctatga ctgcctcttc
 480
 cggctggccc agccagacag tttgagcaag gaggaggagg tggactgttt ggtgctgcag
 540
 ctgcaccggg ttggggagca gctggagaaa atgaatgggc agcgcatgga tgagctcttt
 600
 gtgctgatcc gggatggctt cctgctccca actggcctca gctccctggc cca
 653

<210> 5250
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 5250
 Xaa Arg Val Arg Ala Thr Gly Pro Ala Gly Ala Val Leu Ile Pro Ser
 1 5 10 15
 Pro Val Lys Ser Tyr Arg Gly Trp Leu Val Met Gly Glu Pro Ser Arg
 20 25 30
 Glu Glu Tyr Lys Ile Gln Ser Phe Asp Ala Glu Thr Gln Gln Leu Leu
 35 40 45
 Lys Thr Ala Leu Lys Asp Pro Gly Ala Val Asp Leu Glu Lys Val Ala
 50 55 60
 Asn Val Ile Val Asp His Ser Leu Gln Asp Cys Val Phe Ser Lys Glu
 65 70 75 80
 Ala Gly Arg Met Cys Tyr Ala Ile Ile Gln Ala Glu Ser Lys Gln Ala
 85 90 95
 Gly Gln Ser Val Phe Arg Arg Gly Leu Leu Asn Arg Leu Gln Gln Glu
 100 105 110
 Tyr Gln Ala Arg Glu Gln Leu Arg Ala Arg Ser Leu Gln Gly Trp Val

aacaacaaag gcacgggctg tgaattcgag ctatgggact gtggtggcga tgctaagttt
300
gagtcctgct ggccggccct gatgaaggat gctcatggag tggatgatcgt cttcaatgct
360
gacatcccaa gccaccggaa ggaaatggag atgtggtatt cctgctttgt ccaacagccg
420
tccttacagg acacacagtg tatgctaatt gcacaccaca aaccaggctc tggagatgat
480
aaaggaagcc tgtctttgtc gccacccttg aacaagctga agctggtgca ctcaaactg
540
gaagatgacc ctgaggagat ccggatggaa ttcataaagt atttaaaaag cataatcaac
600
tccatgtctg agagcagaga caggaggag atgtcaatta tgacctagcc agccttcacc
660
tgggactgcc acatccccag tgaaatcagc atgtttctcg gtgcagatct gaaatcacat
720
ccagctcctg atgttttctt ctccctctga ctgcagagga agtggtccta cctgcaggaa
780
ggcacctgtc acacagggcg ttcactcaga ccatctgtgc tctgccctga gttcagttga
840
gaaaatccta ttatcaaatt tggatttctt ggccccagaa cttcccaaag acctgtaaaa
900
tggagggatt taccacctca catatgtcca gttaaacagt ttgtggactt gtaaccgtcg
960
cagcccaatg atacaacagt agtttaatca cgtgaaaaaa aaaa
1004

<210> 5248

<211> 185

<212> PRT

<213> Homo sapiens

<400> 5248

Met	Leu	Lys	Ala	Lys	Ile	Leu	Phe	Val	Gly	Pro	Cys	Glu	Ser	Gly	Lys
1				5					10					15	
Thr	Val	Leu	Ala	Asn	Phe	Leu	Thr	Glu	Ser	Ser	Asp	Ile	Thr	Glu	Tyr
			20					25					30		
Ser	Pro	Thr	Gln	Gly	Val	Arg	Ile	Leu	Glu	Phe	Glu	Asn	Pro	His	Val
		35					40					45			
Thr	Ser	Asn	Asn	Lys	Gly	Thr	Gly	Cys	Glu	Phe	Glu	Leu	Trp	Asp	Cys
	50					55					60				
Gly	Gly	Asp	Ala	Lys	Phe	Glu	Ser	Cys	Trp	Pro	Ala	Leu	Met	Lys	Asp
65					70				75					80	
Ala	His	Gly	Val	Val	Ile	Val	Phe	Asn	Ala	Asp	Ile	Pro	Ser	His	Arg
			85					90						95	
Lys	Glu	Met	Glu	Met	Trp	Tyr	Ser	Cys	Phe	Val	Gln	Gln	Pro	Ser	Leu
		100						105					110		
Gln	Asp	Thr	Gln	Cys	Met	Leu	Ile	Ala	His	His	Lys	Pro	Gly	Ser	Gly
		115					120					125			
Asp	Asp	Lys	Gly	Ser	Leu	Ser	Leu	Ser	Pro	Pro	Leu	Asn	Lys	Leu	Lys
	130					135					140				
Leu	Val	His	Ser	Asn	Leu	Glu	Asp	Asp	Pro	Glu	Glu	Ile	Arg	Met	Glu
145				150					155					160	
Phe	Ile	Lys	Tyr	Leu	Lys	Ser	Ile	Ile	Asn	Ser	Met	Ser	Glu	Ser	Arg

ccttgcgaga gtggaaaaac tgttttgccc aactttctga cagaatcttc tgacatcact
 180
 gaatacagcc caacccaagg agtgagggtt gagtcctgct ggccggccct gatgaaggat
 240
 gctcatggag tggatgctgt cttcaatgct gacatcccaa gccaccggaa ggaaatggag
 300
 atgtggtatt cctgctttgt ccaacagccg tccttacagg acacacagtg tatgctaatt
 360
 gcacaccaca aaccaggctc tggagatgat aaaggaagcc tgtctttgtc gccacccttg
 420
 aacaagctga agctgggtgca ctcaaacctg gaagatgacc ctgaggagat ccggatggaa
 480
 ttc
 483

<210> 5246

<211> 131

<212> PRT

<213> Homo sapiens

<400> 5246

Met	Leu	Lys	Ala	Lys	Ile	Leu	Phe	Val	Gly	Pro	Cys	Glu	Ser	Gly	Lys
1				5					10					15	
Thr	Val	Leu	Ala	Asn	Phe	Leu	Thr	Glu	Ser	Ser	Asp	Ile	Thr	Glu	Tyr
		20						25					30		
Ser	Pro	Thr	Gln	Gly	Val	Arg	Phe	Glu	Ser	Cys	Trp	Pro	Ala	Leu	Met
		35					40					45			
Lys	Asp	Ala	His	Gly	Val	Val	Ile	Val	Phe	Asn	Ala	Asp	Ile	Pro	Ser
	50				55					60					
His	Arg	Lys	Glu	Met	Glu	Met	Trp	Tyr	Ser	Cys	Phe	Val	Gln	Gln	Pro
65					70					75				80	
Ser	Leu	Gln	Asp	Thr	Gln	Cys	Met	Leu	Ile	Ala	His	His	Lys	Pro	Gly
			85					90					95		
Ser	Gly	Asp	Asp	Lys	Gly	Ser	Leu	Ser	Leu	Ser	Pro	Pro	Leu	Asn	Lys
		100					105						110		
Leu	Lys	Leu	Val	His	Ser	Asn	Leu	Glu	Asp	Asp	Pro	Glu	Glu	Ile	Arg
		115					120						125		
Met	Glu	Phe													
		130													

<210> 5247

<211> 1004

<212> DNA

<213> Homo sapiens

<400> 5247

nngccatgga aacgaaagcg gccaaagtaga gctccgtcct gacgcgccgc ctcccgtggg
 60
 ctccggcccg ctaagcccg cgaggacaact atgctgaaag ccaagatcct cttcgtgggg
 120
 ccttgcgaga gtggaaaaac tgttttgccc aactttctga cagaatcttc tgacatcact
 180
 gaatacagcc caacccaagg agtgaggatc ctagaatttg agaaccgcga tgttaccagc
 240

145

<210> 5243

<211> 344

<212> DNA

<213> Homo sapiens

<400> 5243

ngaattcctt gcattctctt ctgggccaaa agaataatga ttaaatttaa gaatcaaacc
 60
 tggctggacc ttacagacga gccatttggt cagaaggtaa ctgtggaccc tgacaactca
 120
 aattgcagtg aagaaagtgc taggttgtct ttgaagcttg gtgatgctgg aaaccccaga
 180
 agtcttgcta taagattcat ccttaccaat tacaacaagt tgtccatcca gagttgggtt
 240
 agtttgcgcc gagtcgagat catttccaac aattcaatcc aagcagtctt taacccaact
 300
 ggcgtatatg ctccctctgg ttactcctac cgctgccaac gcgt
 344

<210> 5244

<211> 114

<212> PRT

<213> Homo sapiens

<400> 5244

Xaa	Ile	Pro	Cys	Ile	Leu	Phe	Trp	Ala	Lys	Arg	Ile	Met	Ile	Lys	Phe
1				5					10					15	
Lys	Asn	Gln	Thr	Trp	Leu	Asp	Leu	Thr	Asp	Glu	Pro	Phe	Gly	Gln	Lys
			20					25					30		
Val	Thr	Val	Asp	Pro	Asp	Asn	Ser	Asn	Cys	Ser	Glu	Glu	Ser	Ala	Arg
		35					40					45			
Leu	Ser	Leu	Lys	Leu	Gly	Asp	Ala	Gly	Asn	Pro	Arg	Ser	Leu	Ala	Ile
		50				55				60					
Arg	Phe	Ile	Leu	Thr	Asn	Tyr	Asn	Lys	Leu	Ser	Ile	Gln	Ser	Trp	Phe
65					70				75					80	
Ser	Leu	Arg	Arg	Val	Glu	Ile	Ile	Ser	Asn	Ser	Ile	Gln	Ala	Val	
			85						90				95		
Phe	Asn	Pro	Thr	Gly	Val	Tyr	Ala	Pro	Ser	Gly	Tyr	Ser	Tyr	Arg	Cys
			100					105					110		
Gln	Arg														

<210> 5245

<211> 483

<212> DNA

<213> Homo sapiens

<400> 5245

nngccatgga aacgaaagcg gccaaagtaga gctccgtcct gacgcgccgc ctcccgtggg
 60
 ctccggcccg ctaagcccg ggcgacaact atgctgaaag ccaagatcct cttcgtgggg
 120

195 200 205
 Ala Cys Arg Arg Glu Lys Val Asp Leu Gly Gly Pro Gly Trp Val Gly
 210 215 220
 Pro Ala
 225

<210> 5241
 <211> 461
 <212> DNA
 <213> Homo sapiens

<400> 5241
 gcggccccc atttgcagcc catggatgca tttatcacgt ttgttcctct gcgtgcctcc
 60
 ccctcaatat gccgggggtg taccatttcc caagggatga cagcagggcc ccacagcgag
 120
 ccccaggctg atccggagcc ctcttcaccc ccgtccaggg ccgtttgcac tgctcccgcc
 180
 atcggcacac cttgttcttg ttgtgctggg acggcagcgc cccgtgaggt cagaggggtg
 240
 ctgtcacatc tgccaccagc tgtggtctcc tggagatttc agtgggtcgg tgcttcgctt
 300
 ctcacctggc cagctctgag ttcagcctct cgctgtggg gaccctgca tctggcgccg
 360
 agaaggagga ggaagaagcc accagaggtt gccaggaacc cagtggcagg ggaggtgggg
 420
 ctgagccagg cccgcccgtg gtgccgggag ttcccacgcg g
 461

<210> 5242
 <211> 146
 <212> PRT
 <213> Homo sapiens

<400> 5242
 Met Asp Ala Phe Ile Thr Phe Val Pro Leu Arg Ala Ser Pro Ser Ile
 1 5 10 15
 Cys Arg Gly Cys Thr His Phe Gln Gly Met Thr Ala Gly Pro His Ser
 20 25 30
 Glu Pro Gln Ala Asp Pro Glu Pro Ser Ser Ser Pro Ser Arg Ala Val
 35 40 45
 Cys Thr Ala Pro Gly Ile Gly Thr Pro Cys Ser Gly Cys Ala Gly Thr
 50 55 60
 Ala Ala Pro Arg Glu Val Arg Gly Leu Leu Ser His Leu Pro Pro Ser
 65 70 75 80
 Val Val Ser Trp Arg Phe Gln Trp Phe Gly Ala Ser Leu Leu Thr Trp
 85 90 95
 Pro Ala Leu Ser Ser Ala Ser Arg Leu Trp Gly Pro Leu His Pro Gly
 100 105 110
 Gly Arg Arg Arg Lys Lys Pro Pro Glu Val Ala Arg Asn Pro Val
 115 120 125
 Ala Gly Glu Val Gly Leu Ser Gln Ala Arg Pro Leu Cys Arg Glu Phe
 130 135 140
 Pro Arg

tcaaagagag agtccttgag cttcatcttc tcaagcaagg tagcactgtc gggggcctgc
 1500
 agacgagaga aagtggacct tgggggtcct ggctgggtgg gacctgcttg agctgccctt
 1560
 ctcttgatg actttgcttt ctttaacaaaa gtctggatgg ttcgaagatc tgagggggcc
 1620
 gagtcccagc catcactgtc ggccgcactc tctcctcgca atggagagct ggagccagag
 1680
 gctggccagt cactttcttc tttgctaggg ggaatgtaac cagcatatgc caaaacaaaa
 1740
 ctgcagaatt tgttgaaatc ctcaattgtt ctccgccgtt tctctggtgg ctgagtctct
 1800
 ggcttaaggg tcggaggtgg atcttcggga ctgggctccg ccattggcttc cagcatcgcc
 1860
 ccctcccctc ctcccggtcc ggccgcccccc tccccggagc cggggatccc ggtgccgcct
 1920
 ctagtgtctg atgtccccc tgcttcgtc cacagaagtg tccgcctcag cccggttgag
 1980
 actcgagtcc gctagccgct gccgccacct ccctctacca ctgcctcccg cactcccgga
 2040
 ccgggcccccc tccccccgcg g
 2061

<210> 5240

<211> 226

<212> PRT

<213> Homo sapiens

<400> 5240

Met Met Ser Ser Ser Met Thr Arg Ile Ser Pro Ser Leu Glu Leu Ala
 1 5 10 15
 Ser Pro Ser Trp Leu Val Ser Val Leu Pro Thr Ser Leu Leu Ser Leu
 20 25 30
 Ser Ala Gly Gly Thr Pro Ser Gly Cys Thr Val Ala Gly Gly Leu Gly
 35 40 45
 Ala Ser Gly Gly Val Gly Ser Thr Gly Thr Gly Ala Ser Pro Pro Thr
 50 55 60
 Thr Val Ala Ile Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
 65 70 75 80
 Ser Ser Glu Ser Val Ser Leu Gly Gly Ala Trp Gly Gly Pro Gly Gly
 85 90 95
 Gly Ser Leu Ser Pro Arg Ser Ala Phe Phe Asn Phe Arg Phe Leu Leu
 100 105 110
 Phe Leu Ile Arg Asp Leu Phe Ser Pro Ser Pro Gly Val Gly Arg Gly
 115 120 125
 Leu Arg Ser Thr Pro Lys Pro Ala Pro Ala Pro Gly Pro Asn Phe Arg
 130 135 140
 Phe Phe Arg Ser Phe Phe Arg Gly Gly Trp Glu Arg Ser Pro Trp Glu
 145 150 155 160
 Arg Gly Thr Gly Val Arg Ala Ala Gly Gly Arg Glu Val Cys Val Arg
 165 170 175
 Asp Val Gly Asp Lys Gly Asp Ala Thr Leu Gly Pro Ser Arg Ser Lys
 180 185 190
 Arg Glu Ser Leu Ser Phe Ile Phe Ser Ser Lys Val Ala Leu Ser Gly

<210> 5239

<211> 2061

<212> DNA

<213> Homo sapiens

<400> 5239

nttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttg
60
agcccaactct gctttattta caacacgcag gctgtctgta caaacagcgg ccgatattat
120
taaaaaacaaa agaggtgagt gagaatcgtc acctttctgc tttccttcct cacttggcca
180
ggctctagta ctccaccttt gagctgccat gcccaatagg ggaagtccaa aattaaaaat
240
acaaccggtg tagaagaaaa taaatgggga gtgaaataga agaaaagatg agggagggga
300
gtgctaatat ttacactaga gttttataga caactgtccc attccatccc aattccaatc
360
ctgaccacaga aagtgatggt ggcaggtcca agagacagag attatgtgtc gggacacaga
420
cagcctccca tccccaaccg taatggattc aatttcaagt ccacagagtg gggaggaagg
480
ataggttggg aaagtgcagc actcattttc aaacaagtct cccttgagaa ttcctgcctt
540
gaagtgcaga cagtatccaa gctccagggg ataggctgag gacctgagg ctccagttccc
600
aaatcatggt gtcatttgga agttccaggc taaagttggt gccatcaggg ctctccagat
660
ttgggaggcc cccctaaccg cggggcctct ggctcagtt ccttgcatth ctggcaataa
720
aagaagtcgg ggacgttggc cttcttaatc ttagcacagg agaggtggat ccacgtccca
780
cacaggctgc actcaatcat gggccgcctt gcaaagggtt ttcgacagta acatgtgatc
840
agatcccatg agtcacacc tgattctacc atgatgtcct cgtccatgac ccgcatctcg
900
ccttacttgg agctggcatc tccatcttgg cttgtttcag tgctgccac ctcttggctt
960
tcactgtcag caggagggac tccttcaggg tgactgtgg cagggggcct aggagcctca
1020
gggggtgttg gcagcacagg gactggggct tcaccccta ccactgttgc catctcttct
1080
tcttcttctt ctctctctc tctctctctt tcttcagagt ctgtatcact ggggggtgac
1140
tggggaggcc caggaggtgg gactctatcc ccccgttctg ctttttttaa cttccgcttc
1200
ttgctcttct tgattcgaga tctcttttcc ccatccccag gagggtggcc aggcctccga
1260
agcaccceaa agccagcccc agtccttggc cccaactttc ggttctttcg gtccttcttt
1320
cgaggaggat gggagaggtc cccctgggaa aggggcacgg gggtaagagc agcagggggc
1380
cgggaggtat gtgtcagggg tgtgggggac aaaggagatg ccactttggg cccatccaga
1440

agagcaagag ctgatctagc tagggctttg tcttttcac tttgtgcata acttacctgt
 780
 taccagtata ggtgggatat acatttatct tgcaggaaat tccccaaagc tcagagtcca
 840
 gttccttcca taaaacaggc tggacaaatg accactatgt tagaccccca ggctcgactt
 900
 caggggtcag tgttcctgtc ccaaacccca cacagaatac tctgcctctg cttcatgtag
 960
 caaatgagca aaaactcagt atctatcaaa agtgtaaatt atatttccta tgcctagtaa
 1020
 ttcacttcat gtctaaaaat ttatctgata gaaacactag caccagtaca tacagaagca
 1080
 tggcaaggat gtttctggca gcacttttct aataataaaa gatttgaaac aaccttaagt
 1140
 attcattatt ggtatataga tcacttatag tatactagac agtggaaatac tatgggtactg
 1200
 ttaataaaga tgaagtaaata ctcttggaag aaaaaaaaa
 1238

<210> 5238

<211> 212

<212> PRT

<213> Homo sapiens

<400> 5238

Phe	Phe	Phe	Leu	Pro	Ser	Ser	Ile	Ser	Phe	Phe	Phe	Thr	Ile	Ser	Phe
1				5					10					15	
Pro	Lys	Ala	Ala	Pro	Tyr	Ser	Val	Gly	Ile	Ala	Asn	Val	Asp	Val	Leu
			20					25					30		
Leu	Leu	Gly	Ile	Tyr	Ile	Ile	His	Arg	Ala	Val	Arg	Asn	Pro	Asp	Asp
		35					40					45			
Leu	Glu	Ala	Arg	Ser	His	Met	His	Leu	Ala	Ser	Ala	Phe	Ala	Gly	Ile
		50				55					60				
Gly	Phe	Gly	Asn	Ala	Gly	Val	His	Leu	Cys	His	Gly	Met	Ser	Tyr	Pro
65					70				75					80	
Ile	Ser	Gly	Leu	Val	Lys	Met	Tyr	Lys	Ala	Lys	Asp	Tyr	Asn	Val	Asp
			85						90					95	
His	Pro	Leu	Val	Pro	His	Gly	Leu	Ser	Val	Val	Leu	Thr	Ser	Pro	Ala
			100					105					110		
Val	Phe	Thr	Phe	Thr	Ala	Gln	Met	Phe	Pro	Glu	Arg	His	Leu	Glu	Met
		115					120					125			
Ala	Glu	Ile	Leu	Gly	Ala	Asp	Thr	Arg	Thr	Ala	Arg	Ile	Gln	Asp	Ala
		130				135					140				
Gly	Leu	Val	Leu	Ala	Asp	Thr	Leu	Arg	Lys	Phe	Leu	Phe	Asp	Leu	Asp
145					150					155				160	
Val	Asp	Asp	Gly	Leu	Ala	Ala	Val	Gly	Tyr	Ser	Lys	Ala	Asp	Ile	Pro
			165					170						175	
Ala	Leu	Val	Lys	Gly	Thr	Leu	Pro	Gln	Glu	Arg	Val	Thr	Lys	Leu	Ala
		180						185					190		
Pro	Arg	Pro	Gln	Ser	Glu	Glu	Asp	Leu	Ala	Ala	Leu	Phe	Glu	Ala	Ser
		195					200						205		
Met	Lys	Leu	Tyr												
			210												

1	5	10	15
Gly Lys Ile Tyr Tyr His Val Ile Thr Arg Gln Thr Gln Trp Asp			
20	25	30	
Pro Pro Thr Trp Glu Ser Pro Gly Asp Asp Ala Ser Leu Glu His Glu			
35	40	45	
Ala Glu Met Asp Leu Gly Thr Pro Thr Tyr Asp Glu Asn Pro Met Lys			
50	55	60	
Ala Ser Lys Lys Pro Lys Thr Ala Glu Ala Asp Thr Ser Ser Glu Leu			
65	70	75	80
Ala Lys Lys Ser Lys Glu Val Phe Arg Lys Glu Met Ser Gln Phe Ile			
85	90	95	
Val Gln Cys Leu Asn Pro Tyr Arg Lys Pro Asp Cys Lys Val Gly Arg			
100	105	110	
Ile Thr Thr Thr Glu Asp Phe Lys His Leu Ala Arg Lys Leu Thr His			
115	120	125	
Gly Val Met Asn Lys Glu Leu Lys Tyr Cys Lys Asn Pro Glu Asp Leu			
130	135	140	
Glu Cys Asn Glu Asn Val Lys His Lys Thr Lys Glu Tyr Ile Lys Lys			
145	150	155	160
Tyr Met Gln Lys Phe Gly Ala Val Tyr Lys Pro Lys Glu Asp Thr Glu			
165	170	175	
Leu Glu			

<210> 5237

<211> 1238

<212> DNA

<213> Homo sapiens

<400> 5237

ntagaagaca aggcgtcggt tgaataactt gcttgatttt tcttcctacc gagtagcatt
 60
 tctttttttt tcaccatata tttccctaag gcagctcctt attctgtagg aattgccaat
 120
 gttgatgtgt tattgttagg tatttatata attcacaggg ctgtcagaaa tcccgatgat
 180
 cttgaagcaa ggtctcatat gcacttggca agtgcttttg ctggcatcgg ctttggaat
 240
 gctggtgttc atctgtgcca tggaatgtct tacccaattt caggtttagt gaagatgtat
 300
 aaagcaaagg attacaatgt ggatcaccca ctggtgcccc atggcctttc tgtggtgctc
 360
 acgtccccag cggtgttcac tttcacggcc cagatgtttc cagagcgaca cctggagatg
 420
 gcagaaatac tgggagccga caccgcact gccaggatcc aagatgcagg gctggtgttg
 480
 gcagacacgc tccggaaatt cttattcgat ctggatgttg atgatggcct agcagctgtt
 540
 ggttactcca aagctgatat cccgcacta gtgaaaggaa cgctgccccca ggaaagggtc
 600
 accaagcttg caccctgtcc ccagtcagaa gaggatctgg ctgctctgtt tgaagcttca
 660
 atgaaactgt attaattgtc attttaactg aaagaattac cgctggccat tgtagtgtg
 720

ccagccgcag cagtgactac aatagttgca ccagggcagc ctcagccctt gcagccatct
 1740
 gaaatgggtt tgacaaataa tctcttggtat ctgccgcccc cctctcctcc caaaccaaaa
 1800
 accattgtct tacctcccaa ctggaagaca gctcgagatc cagaagggaa gatttattac
 1860
 taccatgtga tcacaaggca gactcagtgg gatcctccta cttgggaaag cccaggagat
 1920
 gatgccagcc ttgagcatga agctgagatg gacctgggaa ctccaacata tgatgaaaac
 1980
 cccatgaagg cctcgaaaaa gcccagaca gcagaagcag acacctccag tgaactagca
 2040
 aagaaaagca aagaagtatt cagaaaagag atgtcccgat tcacgtcca gtgctgaac
 2100
 ccttaccgga aacctgactg caaagtggga agaattacca caactgaaga ctttaaacat
 2160
 ctggctcgca agctgactca cgggtgttatg aataaggagc tgaagtactg taagaatcct
 2220
 gaggacctgg agtgcaatga gaatgtgaaa cacaaaacca aggagtacat taagaagtac
 2280
 atgcagaagt ttggggctgt ttacaaaccc aaagaggaca ctgaattaga atgactgttg
 2340
 ggccagggtg ggaggatggg tggtcaggta ggacagactc tagggagagg aaatcctgtg
 2400
 ggccctttctg tcccaccctc gtcagcactg tgctactgat gatacatcac cctggggaat
 2460
 tcaaccctgc agatgtcaac tgaaggccac aaaaatgaac tccatctaca agtgattacc
 2520
 tagttgtgag ctgttggcat gtggttagaa gccatcagag gtgcaagggc ttagaaaaga
 2580
 acctggccag acctgactcc actcttaaac ctgggtcttc tccttggegg tgctgtcagc
 2640
 gcacagaccc atgcgcaccc ccaccacaa ccttttacc tgatgatctg tattatattt
 2700
 taatgtatat gtgaatatat tgaaaataat ttgttttttc ctggtttttg tttggttttc
 2760
 gttttgcttt tagcctctac atgctaggat cacaggaaga ctttgtaagg acagttaaag
 2820
 ttctcctgca aggtttaatt tgttatcatg taaatatcc aaagcaggct gccttggtgt
 2880
 tttggccagc cttgtgctat gttgataaga ttgatttact gcttaaaatc actttacttt
 2940
 atccaatttt tactgaactt tttatgtaaa aaaataaaat caattaaaga aaaaaaaaaa
 3000
 aaaaaaaaaa aaaaaaa
 3017

<210> 5236

<211> 178

<212> PRT

<213> Homo sapiens

<400> 5236

Lys Thr Ile Val Leu Pro Pro Asn Trp Lys Thr Ala Arg Asp Pro Glu

cccattccta ctaaaaatat gttggaggaa agcaaagtac ttccaattat tcaacgctgg
120
tctcagacta agactgctgt cctccggttg agtgaaggag atgggtattc tagtgagaat
180
acatcgctg ctcatacacc actcaacaca cctgacctt ccaccaagct gagcacagaa
240
gctgacacag acactcccaa gaaactaatg tttcgagac tgaaaattat aagtgaaaat
300
agcatggaca gtgcaatctc tgatgcaacc agtgagctag aaggcaagga tggcaaagag
360
gatcttgatc aattagaaaa tgtccctgta gaggaagagg aagaattgca gtcacaacag
420
ctactccac aacagctgcc tgaatgcaaa gttgatagtg aaaccaacat agaagctagt
480
aagctaccta catctgaacc agaagctgac gctgaaatag agcccaaaga gagcaacggc
540
acaaaactag aagaacctat taatgaagaa acaccatccc aagatgaaga ggaggggtg
600
tctgatgtgg agagtgaag gagccaagaa cagccagata aaacagtgga tataagtgat
660
ttggccacca aactcctgga cagttggaaa gacctaaagg aggtatatcg aattccaaag
720
aaaagtcaaa ctgaaaagga aaacacaaca actgaacgag gaagggatgc tgttggcttc
780
agagatcaaa cacctgcccc gaagactcct aataggtcaa gagagagaga cccagacaag
840
caaactcaaa ataaagagaa aaggaaacga agaagctccc tctcaccacc ctcttctgcc
900
tatgagcggg gaacaaaaag gccagatgac agatatgata caccaacttc taaaaagaaa
960
gtacgaatta aagaccgcaa taaactttct acagaggaac gccggaagtt gtttgagcaa
1020
gaggtggctc aacgggaggg tcagaaacaa cagcaacaga tgcagaacct gggaatgaca
1080
tcaccactgc cctatgactc tcttggttat aatgccccgc atcatccctt tgctggttac
1140
ccaccagggt atcccatgca ggcctatgtg gatcccagca accctaatgc tggaaagggtg
1200
ctcctgcca caccagcat ggaccagtg tgttctctg ctcttatga tcatgctcag
1260
cccttgggtg gacattctac agaaccctt tctgcccctc caccagtacc agtggtgcca
1320
catgtggcag ctctgtgga agtttccagt tcccagtatg tggcccagag tgatggtgta
1380
gtacaccaag actccagcgt tgctgtcttg ccagtgccgg cccccggccc agttcagggg
1440
cagaattata gtgttggga ttcaaacc aa cagtctgtca gtgtacagca gcagtactct
1500
cctgcacagt ctcaagcaac catatattat caaggacaga catgtccaac agtctatggt
1560
gtgacatcac cttattcaca gacaactcca ccaattgtac agagttatgc ccagccaagt
1620
cttcagtata tccaggggca acagattttc acagctcatc cacaaggagt ggtggtacag
1680

gaccttggga aaagctggtg ccgagagagg gagaggccag gtgtcccccc acccaactgg
 1980
 cactgattct cagccccctt ctcttacttc tgttggttc aaggagacct gcccttgatg
 2040
 tgtgttgctg ctgaagcacc ctcccagcca gtgagttgga catatgcagc aggcactttg
 2100
 atgtccagga agtacactgg tacatgacag gagcaagggt cagggagggg aggggaaagg
 2160
 tttctacaat gcagatgttt tcaaaattct ccaacaatca tgactctaaa tggatgatt
 2220
 tagggctggg tgcagtgact cacacctgta atctcagcac ttggggaggc caaggcggga
 2280
 ggatcacttg ataccagaag ttcaagacca gtctggcaac gtggagagac caccatcatt
 2340
 tcaaaagaga ccccccgcc cccccggcta atttttaaaa aattagcagt acctgtagtc
 2400
 ccagctactt aggaagctga gataggagaa tcgcttgagt ccaagagctt gaggctacag
 2460
 cgagccaaga ttgcaacact gcatttcagc ctgggtgaca gagcaaggcc ctgtctctct
 2520
 aaaaaagaaa aaaaaggat tgtttagtac acatggccat cagtagaact acatttcata
 2580
 tgatgagaag aaaataatta tttattttac acttgagtca gggagactga caaaggatag
 2640
 gtatggaaaa tggcttgcta ttttcatggc caccctgtcc tgcaatgcgg ggggtgggag
 2700
 gggggacatt ccaatgactt actgctgcat gacaaagcac caaaacatag tggcttaaat
 2760
 agaaatatat tgtctctcat gaaaaaaaaa aaaaaaaaaa a
 2801

<210> 5234

<211> 57

<212> PRT

<213> Homo sapiens

<400> 5234

Leu Thr Pro Val Ile Ser Ala Leu Trp Glu Ala Lys Ala Gly Gly Ser
 1 5 10 15
 Leu Asp Thr Arg Ser Ser Arg Pro Val Trp Gln Arg Gly Glu Thr Thr
 20 25 30
 Ile Ile Ser Lys Glu Thr Pro Pro Pro Arg Leu Ile Phe Lys Lys
 35 40 45
 Leu Ala Val Pro Val Val Pro Ala Thr
 50 55

<210> 5235

<211> 3017

<212> DNA

<213> Homo sapiens

<400> 5235

nncggccggg aaagtaacca gaagcttcag gaagagatta taaagacttt ggaacacttg
 60

caactgggag tggtattaga atgaaaagta attagttaga agggcatata tctcagtggc
360
atgagcattg tggaatatcc tttcctaggc acatttgtcc actaagggaa cagcctcaga
420
aactggtaca gcaatgggtg agatgagatc ctggagagag aacacagcca tcccctatag
480
aaaggcacag cttttgggct tctctggcct gaatgccttc tgggggtattt ccatatgcaa
540
cagcccagag tcatagcctt gggcaaccac acatagaggt ttccttctca cttcagacac
600
atacatcact ttcacaccac ttggggatgg aaatacctac aagagtgaag gtcaagggcc
660
ctccccaggc atctcattca ttactcagct tccttcctga ccaagtctgc caaccaatgg
720
ccagctatgc gcctcatcct cattgcttct gcctccacgt aaatgaaacc aaaggcctca
780
gcatatcctg ggaggactgg gggctgttac ctaatgggcc tctctgtccc attataggtg
840
caaggcaccc catccacaca tttgcaccac tactccaaga tagtattttt cttttcacac
900
aatctcttta cagcagaatc cagagttggg ttgtagtta ccttcctgga aagctcatta
960
tctttgtttg aattaacatt tcagcatgga actaactggg cggaggaagg atcggtatac
1020
gtcttcagaa agttctcatt gcccagctg cctagtacta tacaagaagc tctactttga
1080
tggcagatct aagaaggcta taggcctttg tttgtaggaa gcagtgtcat tacattcaag
1140
cttcacttct ctgattggct tocaaccact gggattcaaa gagaatccaa gggtctgcct
1200
atgtctgatg acataaggaa aacttggtt cctctgctca aggttcccct ctgctcatcc
1260
ctcctcattc agacatcctc caccatacca gtgtttagaa gcaaaacatg aagggttagc
1320
gccaccagga tagttagcag aaatattgtc tgtaaagcta ggcagatgag ccagagaagaa
1380
tgggtcccaga gaaagcagac tgggtccaat agatatcagg cagcaatccc aataaattct
1440
gacatgtcct tggcaatgga agcctgggtt ggagatcctg aggcagctgt gcctactgtt
1500
ccccacctca gaagcttcct gccagagag ccagcagcct tgggatacta atgaggatgc
1560
aactggctta ttggtatgaa atagaagggtg gctttgtagg ggcaagcagg caaagagtac
1620
tatccacatg gcaggcaggt ggctttgtgt ctggaaagct ttgcctagcc agtacagctg
1680
tgagcagagg ctggttataa atttgaactc cctcagccca tttgcaactc tgctctgtt
1740
cccttgcatc ctggttggtt gccctttagt ttctagtaa atgtccttt tgaaaaactc
1800
caacctgtc ttatttaact tgggggaagg ggattctcca atgtcttttc caggataaag
1860
aaggaaatta aaataccatg aaaaaatgga catggcagta gaaaggaaac attctgatca
1920

ctcaaggaag agaaacgaaa caagagcaaa aagaaataat aaataataaa ttttaaaaaa
 840
 cttaa
 845

<210> 5232
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 5232
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu Thr Glu
 20 25 30
 Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu Pro Pro Glu
 35 40 45
 Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu His Ile His Tyr
 50 55 60
 Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp Thr Ser Leu Thr Arg
 65 70 75 80
 Asp Pro Leu Val Ile Glu Leu Gly Gln Lys Gln Val Ile Pro Gly Leu
 85 90 95
 Glu Gln Ser Leu Leu Asp Met Cys Val Gly Glu Lys Arg Arg Ala Ile
 100 105 110
 Ile Pro Ser His Leu Ala Tyr Gly Lys Arg Gly Phe Pro Pro Ser Val
 115 120 125
 Pro Ala Asp Ala Val Val Gln Tyr Asp Val Glu Leu Ile Ala Leu Ile
 130 135 140
 Arg Ala Asn Tyr Trp Leu Lys Leu Val Lys Gly Ile Leu Pro Leu Val
 145 150 155 160
 Gly Met Ala Met Val Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu
 165 170 175
 Tyr Arg Lys Ala Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu
 180 185 190
 Glu Lys Arg Asn Lys Ser Lys Lys Lys
 195 200

<210> 5233
 <211> 2801
 <212> DNA
 <213> Homo sapiens

<400> 5233
 agatctcaat tcacacatga ctacctttga gctaatagact gtctccagaa aataactgtg
 60
 ccccaagaag tgctccagat ttgcaaggaa tagccccaag agaataccaa gacaagcagg
 120
 ctgttccttg gaaaaaatct aatgcaagga gggctagttc acagcaaatt cactgcctcc
 180
 tcccatgcac gtggtagaga gtaccagtat caacatggcc ctgttttctg ctaaaaccag
 240
 attttgagga atcagagacc cccaactacta ctactcagt agctagcagc cccttccttt
 300

<210> 5230
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 5230
 Met Ile Leu Gly Gly Lys Glu Ser Ser Leu Ala Leu Arg Tyr Pro Ser
 1 5 10 15
 Val Cys Lys Gln Thr Glu Tyr Arg Lys Ile Ser Arg Ile Thr Lys Phe
 20 25 30
 Leu Val Leu Cys Gly Leu Arg Val Lys Lys Lys Arg Val Thr Arg Ser
 35 40 45
 Glu Lys Asn Glu Glu Glu Lys Gln Leu His Arg Lys Arg Ala Val Ser
 50 55 60
 Gln Val Pro Pro Thr Val Leu Cys Arg Glu Pro Val Gly Glu Ala Lys
 65 70 75 80
 Trp Gly Glu Trp Gly Thr Ser Gly Gly Arg Pro Gln Gly Thr Ser Trp
 85 90 95
 Cys Gln Arg Met Val Asp
 100

<210> 5231
 <211> 845
 <212> DNA
 <213> Homo sapiens

<400> 5231
 tccggatctt ggaggtaca gagggcgccc ctcgccctcc tccctttcgg aggtggggac
 60
 aaggtggagg aagggctgca ggaggaggag ctctagcatc gcgacccgcc ccgtcccgtc
 120
 cagtctggcc tgggcgcgc gggaaacgtg tcttggtgctgc cgccaccga acagcctgtc
 180
 ctggtgcccc ggctccctgc cccgcgcaca gtcattgaccc tgcgcccctc actcctcccc
 240
 ctccatctgc tgctgctgct gctgctcagt gcggcgggtgt gccgggctga ggctgggctc
 300
 gaaaccgaaa gtcccgtccg gaccctccaa gtggagaccc tggaggagcc cccagaacca
 360
 tgtgccgagc ccgctgcttt tggagacacg cttcacatac actacacggg aagcttggtg
 420
 gatggacgta ttattgacac ctccctgacc agagaccctc tggttataga acttggccaa
 480
 aagcaggtga ttccaggtct ggagcagagt cttctcgaca tgtgtgtggg agagaagcga
 540
 agggcaatca ttctttctca cttggcctat ggaaaacggg gatttccacc atctgtccca
 600
 gcggatgcag tgggtgcagta tgacgtggag ctgattgcac taatccgagc caactactgg
 660
 ctaaagctgg tgaagggcat tttgcctctg gtagggatgg ccatgggtgc agccctcctg
 720
 ggcttcattg ggtatcacct atacagaaag gccaatagac ccaaagtctc caaaaagaag
 780

465 470 475 480
 Val Val Asp Ala Gly Ile Thr Thr Lys Leu Leu Thr Asp Ser Asp Leu
 485 490 495
 Lys Lys Thr Val Asp Glu Ser Ala Arg Ile Gln Arg Ala Tyr Asn His
 500 505 510
 Tyr Phe Asp Leu Ile Ile Ile Asn Asp Asn Leu Asp Lys Ala Phe Glu
 515 520 525
 Lys Leu Gln Thr Ala Ile Glu Lys Leu Arg Met Glu Pro Gln Trp Val
 530 535 540
 Pro Ile Ser Trp Val Tyr
 545 550

<210> 5229

<211> 1031

<212> DNA

<213> Homo sapiens

<400> 5229

acgcgtgtgc tgtggttaca tccgtggaac agacagacag cagctgcccc tgcaaatgtc
 60
 agcgcacagcc cagtcaaaag agcttgaaac ctaccaagcc ggaggactgt gctgtgcctc
 120
 tctcgcccac attttcccca agcactctca ggaacctggc aacagtgtcc ccttgtggcc
 180
 aagcctggaa catcacatct gtacgttgca atctgtggat cagctacgag actgagagaa
 240
 aggaatgaaa ggatggaaga attacaagat caggcactgc tgtctgtctg ttccacggat
 300
 gtaaccacag cacacgcgtg gctcacggta ctagtgtgat aaatgcttgt tacatgaagg
 360
 cgtgaacagg gatgagaaga gacttcctgg agaaacaaaa ggactaacia tcaggaaggg
 420
 gaggtgatcg gggcaggagt aaagtggaca cctcagcaaa gccattcgct gtgatctctg
 480
 attgtgcagt gtcatgtcct gtcaccagag cccctcctgtg tttgatgttg gccaatgccg
 540
 ccagcatgat ctagcaggcc aaatcctaatt ctaccattct ctgacaccag ctggtccctc
 600
 ggggtcgtcc acccgatgtc cccattctc cccacttggc ctccccaca ggctctcggc
 660
 aaaggaccgt gggaggcacc tgtgacactg cccttttctt gtgcagctgt ttttcttctt
 720
 cattcttttc actcctcggt actctttttt ttttactct cageccacac aaaactagga
 780
 actttgttat tctacttatt tttctgtact ctgtctgttt gcacacagat ggatatctga
 840
 gagccagcga actttcttta cctcctagta tcatttcatg aaaattagta gcacctgcac
 900
 aatggggcct tggagacagg aataaaagga aaaatctgga atggaatcac atgacgcaac
 960
 aggctatgaa gactccctgc ccggtgcta tatgtctggt aaacagaata aatagtactt
 1020
 gagcatccct g
 1031

35 40 45
 Lys Ala Arg Glu Arg Leu Glu Asp Ser Lys Leu Glu Ala Val Ser Asp
 50 55 60
 Asn Asn Leu Glu Leu Val Asn Glu Ile Leu Glu Asp Ile Thr Pro Leu
 65 70 75 80
 Ile Asn Val Asp Glu Asn Val Ala Glu Leu Val Gly Ile Leu Lys Glu
 85 90 95
 Pro His Phe Gln Ser Leu Leu Glu Ala His Asp Ile Val Ala Ser Lys
 100 105 110
 Cys Tyr Asp Ser Pro Pro Ser Ser Pro Glu Met Asn Asn Ser Ser Ile
 115 120 125
 Asn Asn Gln Leu Leu Pro Val Asp Ala Ile Arg Ile Leu Gly Ile His
 130 135 140
 Lys Arg Ala Gly Glu Pro Leu Gly Val Thr Phe Arg Val Glu Asn Asn
 145 150 155 160
 Asp Leu Val Ile Ala Arg Ile Leu His Gly Gly Met Ile Asp Arg Gln
 165 170 175
 Gly Leu Leu His Val Gly Asp Ile Ile Lys Glu Val Asn Gly His Glu
 180 185 190
 Val Gly Asn Asn Pro Lys Glu Leu Gln Glu Leu Leu Lys Asn Ile Ser
 195 200 205
 Gly Ser Val Thr Leu Lys Ile Leu Pro Ser Tyr Arg Asp Thr Ile Thr
 210 215 220
 Pro Gln Gln Val Phe Val Lys Cys His Phe Asp Tyr Asn Pro Tyr Asn
 225 230 235 240
 Asp Asn Leu Ile Pro Cys Lys Glu Ala Gly Leu Lys Phe Ser Lys Gly
 245 250 255
 Glu Ile Leu Gln Ile Val Asn Arg Glu Asp Pro Asn Trp Trp Gln Ala
 260 265 270
 Ser His Val Lys Glu Gly Gly Ser Ala Gly Leu Ile Pro Ser Gln Phe
 275 280 285
 Leu Glu Glu Lys Arg Lys Ala Phe Val Arg Arg Asp Trp Asp Asn Ser
 290 295 300
 Gly Pro Phe Cys Gly Thr Ile Ser Ser Lys Lys Lys Lys Lys Met Met
 305 310 315 320
 Tyr Leu Thr Thr Arg Asn Ala Glu Phe Asp Arg His Glu Ile Gln Ile
 325 330 335
 Tyr Glu Glu Val Ala Lys Met Pro Pro Phe Gln Arg Lys Thr Leu Val
 340 345 350
 Leu Ile Gly Ala Gln Gly Val Gly Arg Arg Ser Leu Lys Asn Arg Phe
 355 360 365
 Ile Val Leu Asn Pro Thr Arg Phe Gly Thr Thr Val Pro Phe Thr Ser
 370 375 380
 Arg Lys Pro Arg Glu Asp Glu Lys Asp Gly Gln Ala Tyr Lys Phe Val
 385 390 395 400
 Ser Arg Ser Glu Met Glu Ala Asp Ile Lys Ala Gly Lys Tyr Leu Glu
 405 410 415
 His Gly Glu Tyr Glu Gly Asn Leu Tyr Gly Thr Lys Ile Asp Ser Ile
 420 425 430
 Leu Glu Val Val Gln Thr Gly Arg Thr Cys Ile Leu Asp Val Asn Pro
 435 440 445
 Gln Ala Leu Lys Val Leu Arg Thr Ser Glu Phe Met Pro Tyr Val Val
 450 455 460
 Phe Ile Ala Ala Pro Glu Leu Glu Thr Leu Arg Ala Met His Lys Ala

ccatacaatg acaacctaata accttgcaaa gaagcaggat tgaagttttc caaaggagag
 1200
 attcttcaga ttgtaaatag agaagatcca aattggtggc aggctagcca tgtaaaagag
 1260
 ggaggaagcg ctggtctcat tccaagccag ttcttggaag agaagagaaa ggcatttggt
 1320
 agaagagact gggacaattc aggacctttt tgtggaacta taagtagcaa aaaaaagaaa
 1380
 aagatgatgt atctcacaac cagaaatgca gaatttgatc gtcatgaaat ccagatatat
 1440
 gaggaggtag ccaaaatgcc tcccttccag agaaaaacat tagtattgat aggagctcaa
 1500
 ggtgtaggcc gaagaagctt gaaaaacagg ttcatagtat tgaatcccac tagatttgga
 1560
 actacggtgc catttacttc acggaaacca agggaagatg aaaaagatgg ccaggcatat
 1620
 aagttttgtgt cacgatctga gatggaagca gatattaaag ctggaaagta tttggaacat
 1680
 ggggaatatg aaggaaatct ctatggaacc aaaattgatt ctattcttga ggttgtccaa
 1740
 actggacgga cttgcattct ggatgtcaac ccacaagcac tgaaagtatt gaggacatca
 1800
 gaggtttatgc cctatgtggt atttattgag gctccggagc tagagacgtt acgtgccatg
 1860
 cacaaggctg tgggtgatgc aggaatcact accaagcttc tgaccgactc tgacttgaag
 1920
 aaaacagtgg atgaaagtgc acggattcag agagcataca accactatct tgatttgatc
 1980
 atcataaatg ataactctaga caaagccttt gaaaaactgc aaactgccat agagaaactg
 2040
 agaatggaac cacagtgggt cccaatcagc tgggtttact gatgattcag taaggttaac
 2100
 aatgaaaatt aaactcttaa aaagtgactg caacaaataa accttctact gagaaaatac
 2160
 atcacagata gaagattatc tgctaagtcc aggcatTTTT atggtgtaga ttgaaataat
 2220
 agtacacttc tgaattttta tataaaatgt ggttggaggg tgtactaata tataatttat
 2280
 cttaattttt ctaactttgt atggataatc tttctattca tatcacataa agaaatgcgt
 2340
 tgaagcaaaa aaaaaaaaaa aaaaaa
 2366

<210> 5228

<211> 550

<212> PRT

<213> Homo sapiens

<400> 5228

Arg	Leu	Gly	Val	Val	Glu	Ile	Gly	Arg	Ile	Pro	Gly	Gly	Ile	Trp	Glu
1				5				10					15		
Asn	Leu	Thr	Glu	Leu	Pro	Ser	Ser	Thr	Gly	Ala	Glu	Glu	Ile	Asp	Leu
			20					25					30		
Ile	Phe	Leu	Lys	Gly	Ile	Met	Glu	Asn	Pro	Ile	Val	Lys	Ser	Leu	Ala

50 55 60
 Gly Pro Leu Ser Trp Tyr Tyr Leu Phe Pro Trp Ala Cys Pro Ser Asp
 65 70 75 80
 Gln Ala Cys Gln Asp Ser Ala Tyr Val Ser Pro Ser Pro Ser Ser Ala
 85 90 95
 Leu Gly Pro Ser Leu Pro Gln Pro Gln Leu Pro Pro Pro Gly Ser Pro
 100 105 110
 Pro

<210> 5227

<211> 2366

<212> DNA

<213> Homo sapiens

<400> 5227

tcgcaacag gccacccagg cacacgtgga tgttctttag ctccttggcg ccaccagatg
 60
 cagctgccag tgagatgttc tgcagctgtt tgatcctctc gctgaagtcg gacaccact
 120
 ggatgacggt catgccggca ggcaccgtgt agaaggccag tgtggtaacc ttacctgtct
 180
 acctgaactt caccctgca gacctcatct tcaccgtgga cttcgaaatt gctacaaagg
 240
 aggatcctcg cagcttctac gagcggggtg tcgcagtctt gtgcacagag taaacttttc
 300
 tagctgcccc tttctgtaat agtgaaagt ggtatttaac atttattcat ttttaaaata
 360
 tttggaaggt ctgagcttgt gaaaagaaag tgggttgtct gaggttgag gaagctgaat
 420
 ggaatctgac ggttgggagt ggtggaaatt ggaaggatac caggaggtat ttgggaaaac
 480
 cttacggagc tgccctcgtc tactggagca gaagaaatag acctaatttt cctcaaggga
 540
 attatggaga atcctattgt aaaatcactt gctaaggctc gtgagaggct agaagattcc
 600
 aaactagaag ctgtcagtga caataacttg gaattagtca atgaaattct tgaagacatc
 660
 actcctctaa taaatgtgga tgaaaatgtg gcagaattgg ttggtatact caaagaacct
 720
 cacttccagt cactgttga ggcccatgat attgtggcat caaagtgtta tgattcacct
 780
 ccatcaagcc cagaaatgaa taattcttct atcaataatc agttattacc agtagatgcc
 840
 attcgtattc ttggtattca caaaagagct ggggaaccac tgggtgtgac atttaggggt
 900
 gaaaataatg atctggtaat tgcccgaatc ctccatgggg gaatgataga tcgacaaggt
 960
 ctacttcatg tgggagatat aattaaagaa gtcaatggcc atgaggttgg aaataatcca
 1020
 aaggaattac aagaattact gaaaaatatt agtggaagtg tcaccctaaa aatcttacca
 1080
 agttatagag ataccattac tctcaacag gtatttgtga agtgtcattt tgattataat
 1140

```

      1           5           10           15
Phe Ile Asp Ile Ala Cys Asp Glu Ile Pro Glu Arg Tyr Tyr Lys Glu
      20           25           30
Ser Glu Asp Pro Lys His Phe Lys Ser Glu Lys Thr Gly Arg Gly Gln
      35           40           45
Leu Arg Glu Gly Trp Arg Asp Ser His Gln Pro Ile Met Cys Ser Tyr
      50           55           60
Lys Leu Val Thr Val Lys Phe Glu Val Trp Gly Leu Gln Thr Arg Val
      65           70           75           80
Glu Gln Phe Val His Lys Val Val Arg Asp Ile Leu Leu Ile Gly His
      85           90           95
Arg Gln Ala Phe Ala Trp Val Asp Glu Trp Tyr Asp Met Thr Met Asp
      100          105          110
Asp Val Arg Glu Tyr Glu Lys Asn Met His Glu Gln Thr Asn Ile Lys
      115          120          125
Val Cys Asn Gln His Ser Ser Pro Val Asp Asp Ile Glu Ser His Ala
      130          135          140
Gln Thr Ser Thr
145

```

<210> 5225

<211> 394

<212> DNA

<213> Homo sapiens

<400> 5225

```

acgcgtgaag gggctgggggt gggcaatcag ggaggacttc ctggaggcgg cagctgaggc
60
tggggcagag aaggacccag ggcactggaa ggggaaggag aaacgtaagc agagtcttgg
120
caggcctggg cagacggaca tgcccaaggg aacagatagt accaggacag gggaccctgg
180
tctgaagggg cgatagcctg gccccagtg gaaacagccc ctcccaaccc tggcggcaga
240
caggggagggt cggcaggtat gtgagatgca aacctggggg actgcccac cccagtgga
300
tgtgaggaca cgggtgggttc aggaagtgga gtgacaaatg ggctgtgctg gacttgcttt
360
ccccacatga aggttaggaa ccaagagaac ggcc
394

```

<210> 5226

<211> 113

<212> PRT

<213> Homo sapiens

<400> 5226

```

Met Trp Gly Lys Gln Val Gln His Ser Pro Phe Val Thr Pro Leu Pro
1           5           10           15
Glu Pro Thr Val Ser Ser His Pro Leu Gly Asp Gly Gln Ser Pro Arg
      20           25           30
Phe Ala Ser His Ile Pro Ala Asp Pro Pro Cys Leu Pro Pro Gly Leu
      35           40           45
Gly Gly Ala Val Ser Thr Gly Gly Gln Ala Ile Ala Pro Ser Asp Gln

```

<213> Homo sapiens

<400> 5222

```

Xaa Arg Thr Leu Gln Val Glu Thr Leu Val Glu Pro Pro Glu Pro Cys
 1           5           10           15
Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu His Ile His Tyr Thr Gly
      20           25           30
Ser Leu Val Asp Gly Arg Ile Ile Asp Thr Ser Leu Thr Arg Asp Pro
      35           40           45
Leu Val Ile Glu Leu Gly Gln Lys Gln Val Ile Pro Gly Leu Glu Gln
      50           55           60
Ser Leu Leu Asp Met Cys Val Gly Glu Lys Arg Arg Ala Ile Ile Pro
65           70           75           80
Ser His Leu Ala Tyr Gly Lys Arg Gly Phe Pro Pro Ser Val Pro Gly
      85           90           95
Thr Lys Asp Asn Leu Met Arg Pro Pro Gly Met Thr Ser Ser Ser Gln
      100           105           110

```

<210> 5223

<211> 637

<212> DNA

<213> Homo sapiens

<400> 5223

```

ngcaccattt tcgacaatga agccaaagac gtggagagag aagtttgctt tattgatatt
60
gcctgcgatg aaattccaga gcgctactac aaagaatctg aggatcctaa gcacttcaag
120
tcagagaaga caggacgggg acagttgagg gaaggctgga gagatagtca tcagcctatc
180
atgtgtcctc acaagctggt gactgtgaag tttgaggtct gggggcttca gaccagagtg
240
gaacaatttg tacacaaggt ggtccgagac attctgctga ttggacatag acaggctttt
300
gcatggggtg atgagtggtg tgatatgaca atggatgatg ttcgggaata cgagaaaaac
360
atgcatgaac aaaccaacat aaaagtttgc aatcagcatt cctcccctgt ggatgacata
420
gagagtcatg cccaaacaag tacatgacaa tggatgaagt ccgagaattt gaacgagcca
480
ctcaggaagc caccaacaag aaaatcggca ttttcccacc tgcaatttct atctccagca
540
tccccctgct gcctttcttc gtcgcagtg cgcttctag tgetccatcc accctctct
600
ccacagacgc acccgaattt ctgtccgttc ccaaaga
637

```

<210> 5224

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5224

```

Xaa Thr Ile Phe Asp Asn Glu Ala Lys Asp Val Glu Arg Glu Val Cys

```

<400> 5220

Met Ala Ala Thr Glu Pro Ile Leu Ala Ala Thr Gly Ser Pro Ala Ala
 1 5 10 15
 Val Pro Pro Glu Lys Leu Glu Gly Ala Gly Ser Ser Ser Ala Pro Glu
 20 25 30
 Arg Asn Cys Val Gly Ser Ser Leu Pro Glu Ala Ser Pro Pro Ala Pro
 35 40 45
 Glu Pro Ser Ser Pro Asn Ala Ala Val Pro Glu Ala Ile Pro Thr Pro
 50 55 60
 Arg Ala Ala Ala Ser Ala Ala Leu Glu Leu Pro Leu Gly Pro Ala Pro
 65 70 75 80
 Val Ser Val Ala Pro Gln Ala Glu Ala Glu Ala Arg Ser Thr Pro Gly
 85 90 95
 Pro Ala Gly Ser Arg Leu Gly Pro Glu Thr Phe Arg Gln Arg Phe Arg
 100 105 110
 Gln Phe Arg Tyr Gln Asp Ala Ala Gly Pro Arg Glu Ala Phe Arg Gln
 115 120 125
 Leu Arg Glu Leu Ser Arg Gln Trp Leu Arg Pro Asp Ile Arg Thr Lys
 130 135 140
 Glu Gln Ile Val Glu Met Leu Val Gln Glu Gln Leu Leu Ala Ile Leu
 145 150 155 160
 Pro Glu Ala Ala Arg Ala Arg Arg Ile Arg Arg Arg Thr Asp Val Arg
 165 170 175
 Ile Thr Gly

<210> 5221

<211> 497

<212> DNA

<213> Homo sapiens

<400> 5221

ntccggaccc tccaagtgga gaccctggtg gagccccag aaccatgtgc cgagcccgct
 60
 gcttttggag acacgcttca catacactac acgggaagct tggtagatgg acgtattatt
 120
 gacacctccc tgaccagaga ccctctggtt atagaacttg gccaaaagca ggtgattcca
 180
 ggtctggagc agagtcttct cgacatgtgt gtgggagaga agcgaagggc aatcattcct
 240
 tctcacttgg cctatggaaa acggggattt ccaccatctg tcccaggac taaagacaac
 300
 ctgatgaggc cacctggcat gacctccagc agccagtaac ttgttaggga agagacctgc
 360
 ttgggccaca tgggtctgct gcctgtgcca ccacctttcc cagaacactg gacttctttc
 420
 ctgccctttt ctacaactct acgctgtgtc agctgtacag ccacccccca ccccttcctt
 480
 tcagccacca tctgtcc
 497

<210> 5222

<211> 112

<212> PRT

<210> 5219
<211> 1212
<212> DNA
<213> Homo sapiens

<400> 5219
nnagagactt tcgcttccgg ctgcgcacg cttcgctggt gcaggtaagc tccgcacact
60
ctcggccgggt cccgagtccg actccctcaa ggggtgacgcg agctctgccc ttttaaccgga
120
aacgtctccc tgctcaccac acccccgcgc agacgcagtg ctgagcacac agctaccgga
180
caaagagtga cgcccgagc tggagttatg gcggctacgg agccgatctt ggcgccact
240
gggagtccg cgcggtgcc accggagaaa ctggaaggag ccggttcgag ctgagccct
300
gagcgtaact gtgtgggctc ctcgctgcca gaggcctcac cgctgcccc tgagccttcc
360
agtcccaacg ccgcggtccc tgaagccatc cctacgcccc gagctgcggc ctccgcggcc
420
ctggagctgc ctctcggggc cgcacccgtg agcgtagcgc ctcaggccga agctgaagcg
480
cgctccacac caggccccgc cggctctaga ctcggtcccg agacgttccg ccagcgtttc
540
cggcagttcc gctaccagga tgcggcgggt ccccgaggag ctttcgggca gctgcgggag
600
ctgtccccgc agtggctgcg gcctgacatc cgcaccaagg agcagatcgt ggagatgctg
660
gtgcaagagc agctgctcgc catcctgccc gaggcggctc gggcccggcg gatccgcgcg
720
cgcacggatg tgcgcacac tggctgagcg gtggagctgc gggcggccag ggccgggcgc
780
tctgtgcgga ctggggccat gatcgggccc gggggcctga gcctgggacc ccaccccg
840
ttaatgaaaa atgagttttg gcagcgctg tggctctggtg tgtctcttcc attcgttctt
900
attgggttta tttaccaag cctgtttcct accgccttcc tggctggtgg cgaaacgaag
960
ttgggagtcc gtaacaataa ggccttcggt ggctatagtg ggatctttag atgttgactg
1020
aacctagggt atccctctac cacacatggg aagtttttca cctgggctcc caaggaccca
1080
cttgggtttc ttacacgcaa aatagctggc tctattaaat gctcacttaa ctggctaccc
1140
ctataccaat atgggcacca acttgcaact gccctttggg tacaggcttc ccacaatgtc
1200
cnagttactg gg
1212

<210> 5220
<211> 179
<212> PRT
<213> Homo sapiens

115 120 125
 Arg His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg Leu
 130 135 140
 Gln Glu Arg Gly Leu Arg Ser Gln Cys Glu Cys Leu Arg Gly Arg Lys
 145 150 155 160
 Ala Ser Leu Glu Glu Leu Gln Ser Val His Ser Glu Arg His Val Leu
 165 170 175
 Leu Tyr Gly Thr Asn Pro Leu Ser Arg Leu Lys Leu Asp Asn Gly Lys
 180 185 190
 Leu Ala Gly Leu Leu Ala Gln Arg Met Phe Val Met Leu Pro Cys Gly
 195 200 205
 Gly Val Gly Val Asp Thr Asp Thr Ile Trp Asn Glu Leu His Ser Ser
 210 215 220
 Asn Ala Ala Arg Trp Ala Ala Gly Ser Val Thr Asp Leu Ala Phe Lys
 225 230 235 240
 Val Ala Ser Arg Glu Leu Lys Asn Gly Phe Ala Val Val Arg Pro Pro
 245 250 255
 Gly His His Ala Asp His Ser Thr Ala Met Gly Phe Cys Phe Phe Asn
 260 265 270
 Ser Val Ala Ile Ala Cys Arg Gln Leu Gln Gln Gln Ser Lys Ala Ser
 275 280 285
 Lys Ile Leu Ile Val Asp Trp Asp Val His His Gly Asn Ala Thr Gln
 290 295 300
 Gln Thr Phe Tyr Gln Asp Pro Ser Val Leu Tyr Ile Ser Leu His Arg
 305 310 315 320
 His Asp Asp Gly Asn Phe Phe Pro Gly Ser Gly Ala Val Asp Glu Val
 325 330 335
 Gly Ala Gly Ser Gly Glu Gly Phe Asn Val Asn Val Ala Trp Ala Gly
 340 345 350
 Gly Leu Asp Pro Pro Met Gly Asp Pro Glu Tyr Leu Ala Ala Phe Arg
 355 360 365
 Ile Val Val Met Pro Ile Ala Arg Glu Phe Ser Pro Asp Leu Val Leu
 370 375 380
 Val Ser Ala Gly Phe Asp Ala Ala Glu Gly His Pro Ala Pro Leu Gly
 385 390 395 400
 Gly Tyr His Val Ser Ala Lys Cys Phe Gly Tyr Met Thr Gln Gln Leu
 405 410 415
 Met Asn Leu Ala Gly Gly Ala Val Val Leu Ala Leu Glu Gly Gly His
 420 425 430
 Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ala Ala Leu
 435 440 445
 Leu Gly Asn Arg Val Asp Pro Leu Ser Glu Glu Gly Trp Lys Gln Lys
 450 455 460
 Pro Asn Leu Asn Ala Ile Arg Ser Leu Glu Ala Val Ile Arg Val His
 465 470 475 480
 Ser Lys Tyr Trp Gly Cys Met Gln Arg Leu Ala Ser Cys Pro Asp Ser
 485 490 495
 Trp Val Pro Arg Val Pro Gly Ala Asp Lys Glu Glu Val Glu Ala Val
 500 505 510
 Thr Ala Leu Ala Ser Leu Ser Val Gly Ile Leu Ala Glu Asp Arg Pro
 515 520 525
 Ser Glu Gln Leu Val Glu Glu Glu Glu Pro Met Asn Leu
 530 535 540

agaggagacg ggctgggcg cgacccccac agggctctcg agaacagatt ctcccctcca
 3300
 gtatgggccc tggctgtggc cccatttcct caggactgca cagaggagga ctggctccgg
 3360
 ctccgtcggg ctcaccctta accactattc ctggctctgc aaacccaga ctttgacac
 3420
 agccccaggc tccacacaga aatgtgaact tggcctcaga caggctggcc cttcctaggc
 3480
 tctaggggct aggggggagt ggggagccaa gaggtcccat attcctgagt gcaggggtag
 3540
 tccctctcac ctgcttctc agacgactct ggaagcttcc ctctaccacc gggcactgag
 3600
 acgaagctcc ctgacagccg agactggcag ccctccatct ggtecgtaac ctgccagag
 3660
 gccccctac atcaacctec tggcgatgcc ctgggtggagc agatgggtgc tctgggagtc
 3720
 ctgtgcttcc tgatecaatg gtgccaacc cttcatctcc ccagaagcg cagcataccc
 3780
 ctgggacccc tgggccactg cccactcggg gagccttctc tgtttctggg gcctccccc
 3840
 ccatagctct gattcccacc ccacatagga atagcctgac tgagggggaa ggggtgggag
 3900
 agaagataca gacatggagg aggggaggct gctctggcaa agtcttcaag gcttttgggg
 3960
 gtccaggcct ggggtcaaga aggaaaatgt gtgtgagcat gtgtgtgagt gaggcgtgtg
 4020
 tgtgagcgtg tgtgtgagtg aggcgtgtgt gtgtgtcttt cctaggaccc accataccct
 4080
 gtgtatgtat gcatgttttt gtaaaaagga agaaaatgga aaaaaatctg aacaataaat
 4140
 gttttatttg ctttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 4189

<210> 5218

<211> 541

<212> PRT

<213> Homo sapiens

<400> 5218

Met	Ala	Gly	Asp	Arg	Ala	Arg	Trp	Trp	Thr	Met	Ala	Trp	Ser	Thr	Gly
1			5					10					15		
Ser	Trp	Ala	Met	Gly	Ser	Leu	Arg	Pro	Glu	Ala	Pro	Leu	Leu	Ser	Ser
		20					25					30			
Ser	Thr	Leu	Arg	Cys	Cys	Ser	Gly	Asn	Ser	Ser	Asp	Trp	Leu	Gly	Gly
	35					40					45				
Ser	Pro	Gly	Ala	Ala	Pro	Gly	Thr	Leu	Cys	Cys	Phe	Leu	Trp	Pro	Arg
	50				55						60				
Val	Gly	Thr	Gly	Leu	Cys	Pro	Gly	Leu	Ser	Leu	Pro	Gln	Pro	His	Leu
65				70				75				80			
Pro	His	Cys	Gln	Pro	Gln	Ser	Leu	Pro	Ala	Xaa	Ala	Arg	Val	Leu	Ser
			85				90					95			
Ser	Ser	Glu	Thr	Pro	Ala	Arg	Thr	Leu	Pro	Phe	Thr	Thr	Gly	Leu	Ile
	100						105					110			
Tyr	Asp	Ser	Val	Met	Leu	Lys	His	Gln	Cys	Ser	Cys	Gly	Asp	Asn	Ser

tgtccccggc tcagtcttcc ccagccgcac ctgcctcact gtcagcccca gagcctgcc
1680
gcnaggccc gagtctctc cagctcagag acccctgcc ggaccctgcc cttcaccaca
1740
gggctgatct atgactcggc catgctgaag caccagtgtc cctgcggtga caacagcagg
1800
cacccgagc acgccggccg catccagagc atctgggtccc ggctgcagga gcgggggctc
1860
cggagccagt gtgagtgtct ccgaggccgg aaggcctccc tggagagct gcagtcggtc
1920
cactctgagc ggcacgtgtc cctctacggc accaaccgc tcagccgct caaactggac
1980
aacgggaagc tggcagggtc cctggcacag cggatgtttg tgatgtgcc ctgtgggtgg
2040
gttgggggtg acactgacac catctggaat gagcttcatt cctccaatgc agcccgctgg
2100
gccgctggca gtgtcactga cctcgcttc aaagtggctt ctcgtgagct aaagaatggt
2160
ttcgctgtgg tgcggccccc aggacacat gcagatcatt caacagccat gggcttctgc
2220
ttcttcaact cagtggccat cgcctgccgg cagctgcaac agcagagcaa ggccagcaag
2280
atctcattg tagactggga cgtgcacat ggcaacgcca cccagcaaac cttctacaa
2340
gacccagtg tgctctacat ctccctgcat cgccatgacg acggcaactt cttcccgagg
2400
agtggggctg tggatgaggt aggggctggc agcggtgagg gcttcaatgt caatgtggcc
2460
tgggctggag gtctggaccc ccccatgggg gatcctgagt acctggctgc tttcaggata
2520
gtcgtgatgc ccatcgcccg agagtctct ccagacctag tcctggtgtc tgctggattt
2580
gatgtgtctg agggtcaccc ggccccactg ggtggctacc atgtttctgc caaatgttt
2640
ggatacatga cgcagcaact gatgaacctg gcaggaggcg cagtgggtgt ggccttgagg
2700
ggtggccatg acctcacagc catctgtgac gcctctgagg cctgtgtggc tgctcttctg
2760
ggtaacaggg tggatcccct ttcagaagaa ggctggaaac agaaaccaa cctcaatgcc
2820
atccgctctc tggaggccgt gatccgggtg cacagtaaact actggggctg catgcagcgc
2880
ctggcctcct gtccagactc ctgggtgcct agagtgcag gggctgacaa agaagaagtg
2940
gaggcagtga ccgcactggc gtccctctct gtgggcatcc tggctgaaga taggcctcg
3000
gagcagctgg tggaggagga agaacctatg aatctctaag gctctggaac catctgcccg
3060
cccaccatgc ccttgggacc tggttctctt ctaaccctg gcaatagccc ccattcctgg
3120
gtcttttagag atcctgtggg caagtagttg gaaccagaga acagcctgcc tgctttgaca
3180
gttatcccag ggagcgtgag aaaatccctg ggtctagaat ggggaactga gaggaccctg
3240

atcagtaaaa tggggagaaa ttccaagcac acttctcaga gcagagcaga agagggtgac
60
tatggagagg agaatgaaga tgggaccaca ggtgagcccc gggtgcccac ttactgcagc
120
ccccactggc gcaggctgcc ccaggccctg tgcagacaca ccaggccctc agccgcagcc
180
catggacctg cgggtgccag cggccccccag tggagcccc accagagccc acattgctgg
240
ccctgcagcg tccccagcgc ctgcaccacc acctcttctt agcaggcctg cagcagcagc
300
gctcgggtgga gcccattgagg ctctccatgg acacgccgat gcccagattg cagggtgggac
360
cccaggaaca acagctgcgg cagcttctcc acaaggacaa gagcaagcga agtgctgtag
420
ccagcagcgt ggtcaagcag aagctagcgg aggtgattct gaaaaaacag caggcggccc
480
tagaaagaac agtccatccc aacagccccg gcattcccta cagaaccctg gagccccctg
540
agacggaagg agccaccgcg tccatgctca gcagcttttt gctctctgtt cccagcctgc
600
ccagtgaccc cccagagcac ttcctctctg gcaagacagt ctctgagccc aacctgaagc
660
tgcgctataa gcccagaag tccctggagc ggaggaagaa tccactgctc cgaaaggaga
720
gtgcgcccc cagcctccgg cggcggcccc cagagaccct cggagactcc tccccagta
780
gtagcagcac gcccgcatca ggatgcagct cccccaatga cagcgagcac ggccccaatc
840
ccatcctggg ctccggaggc ctcttgggcc agcggctgcg gctgcaggag acttctgtgg
900
ccccgttcgc cttgccgaca gtgtccttgc tgcccgcaat cactctgggg ctgccgcccc
960
ctgccagggc tgacagtgc cgcaggaccc atccgactct gggccctcgg ggccaatcc
1020
tggggagccc ccacactccc ctcttctctg cccatggctt ggagcccgag gctgggggca
1080
ccttgccctc tcgcctgcag ccattctctc tcttgaccc ctcaggctct catgccccgc
1140
tgctgactgt gcccgggctt gggcccttgc ccttccactt tgcccagtcc ttaatgacca
1200
ccgagcggct ctctgggtca ggctccact ggccactgag ccggactcgc tcagagcccc
1260
tgccccccag tgccaccgct cccccaccgc cgggccccat gcagccccgc ctggagcagc
1320
tcaaaactca cgtccagggt atcaagaggt cagccaagcc gactgagaag ccccggtgc
1380
ggcagatacc ctcggctgaa gacctggaga cagatggcgg gggaccgggc cagggtgggtg
1440
acgatggcct ggagcacagg gagctgggcc atgggcagcc tgaggccaga ggccccgctc
1500
ctctccagca gcacctcag gtgttgctct gggaacagca gcgactggct gggcggctcc
1560
cccggggcag caccggggac actgtgctgc ttcctctggc ccagggtggg caccggcctc
1620

<210> 5215
 <211> 548
 <212> DNA
 <213> Homo sapiens

<400> 5215
 nacgcgtgat ccatgggagg aggtaacatg tcaggatgag cggaagtttg gaagaagttg
 60
 gtcccaggcc tgaaagatca ctgtgagggg tcaggacttc agtggaggag ggactgtaga
 120
 ggttttagaa gcagcaagag aactagaatg agaaggactt ggagatgtga ctgcattgtc
 180
 gctgtctcgc gagaaaactt taacacgtga ggagttgcct ctgaaggggt agcaggggag
 240
 ttgcttcagt tgcgtcttag tccagtgaa gattctgtga acctgggggt aatgaggaca
 300
 aagaacttgg aacagcccg aacctcggtt gatgaagccg cggccgggnt tgagaggacc
 360
 gactgcagtt ctgaaagacg ttctgctgtg ggttcaatgc tatcagacag catcacgccc
 420
 cacagagaaa tctttcatga aaggaagagt ccatcgctgt ggccaacttt tttgtggtca
 480
 tagtttaaga agttgcccc gctccagca gccaccgccc caacgagtca gccgccgtcc
 540
 acattgag
 548

<210> 5216
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 5216
 Ala Gly Glu Leu Leu Gln Leu Arg Ser Ser Pro Ser Glu Asp Ser Val
 1 5 10 15
 Asn Leu Gly Val Met Arg Thr Lys Asn Leu Glu Gln Pro Gly Thr Ser
 20 25 30
 Val Asp Glu Ala Ala Ala Gly Xaa Glu Arg Thr Asp Cys Ser Ser Glu
 35 40 45
 Arg Arg Ser Ala Val Gly Ser Met Leu Ser Asp Ser Ile Thr Pro His
 50 55 60
 Arg Glu Ile Phe His Glu Arg Lys Ser Pro Ser Leu Trp Pro Thr Phe
 65 70 75 80
 Leu Trp Ser

<210> 5217
 <211> 4189
 <212> DNA
 <213> Homo sapiens

<400> 5217

930 935 940
 Val Gln Ile Gln Ser Pro Tyr Leu Pro Ile Tyr Phe Gly Asn Val Cys
 945 950 955 960
 Leu Arg Phe Leu Pro Val Phe Asp Ile Val Ile His Arg Phe Leu Glu
 965 970 975
 Leu Leu Pro Val Ser Lys Ser Leu Glu Thr Leu Leu Asp His Leu Gly
 980 985 990
 Gly Leu Tyr Lys Phe His Asp Arg Pro Val Thr Tyr Leu Tyr Asn Thr
 995 1000 1005
 Leu His Tyr Tyr Glu Met His Leu Arg Asp Arg Ala Phe Leu Lys Arg
 1010 1015 1020
 Lys Leu Val His Ala Ile Ile Gly Ser Leu Lys Asp Asn Arg Pro Gln
 1025 1030 1035 1040
 Gly Trp Cys Leu Ser Asp Thr Tyr Leu Lys Cys Ala Met Asn Ala Arg
 1045 1050 1055
 Glu Glu Asn Pro Trp Val Pro Asp Asp Thr Tyr Tyr Cys Arg Leu Ile
 1060 1065 1070
 Gly Arg Leu Val Asp Thr Met Ala Gly Lys Ser Pro Gly Pro Phe Pro
 1075 1080 1085
 Asn Cys Asp Trp Arg Phe Asn Glu Phe Pro Asn Pro Ala Ala His Ala
 1090 1095 1100
 Leu His Val Thr Cys Val Glu Leu Met Ala Leu Ala Val Ser Gly Lys
 1105 1110 1115 1120
 Glu Val Gly Asn Ala Leu Leu Asn Val Val Leu Lys Ser Gln Pro Leu
 1125 1130 1135
 Val Pro Arg Glu Asn Ile Thr Ala Trp Met Asn Ala Ile Gly Leu Ile
 1140 1145 1150
 Ile Thr Ala Leu Pro Glu Pro Tyr Trp Ile Val Leu His Asp Arg Ile
 1155 1160 1165
 Val Ser Val Ile Ser Ser Pro Ser Leu Thr Ser Glu Thr Glu Trp Val
 1170 1175 1180
 Gly Tyr Pro Phe Arg Leu Phe Asp Phe Thr Ala Cys His Gln Ser Tyr
 1185 1190 1195 1200
 Ser Glu Met Ser Cys Ser Tyr Thr Leu Ala Leu Ala His Ala Val Trp
 1205 1210 1215
 His His Ser Ser Ile Gly Gln Leu Ser Leu Ile Pro Lys Phe Leu Thr
 1220 1225 1230
 Glu Val Leu Leu Pro Ile Val Lys Thr Glu Phe Gln Leu Leu Tyr Val
 1235 1240 1245
 Tyr His Leu Val Gly Pro Phe Leu Gln Arg Phe Gln Gln Glu Arg Thr
 1250 1255 1260
 Arg Cys Met Ile Glu Ile Gly Val Ala Phe Tyr Asp Met Leu Leu Asn
 1265 1270 1275 1280
 Val Asp Gln Cys Ser Thr His Leu Asn Tyr Met Asp Pro Ile Cys Asp
 1285 1290 1295
 Phe Leu Tyr His Met Lys Tyr Met Phe Thr Gly Asp Ser Val Lys Glu
 1300 1305 1310
 Gln Val Glu Lys Ile Ile Cys Asn Leu Lys Pro Ala Leu Lys Leu Arg
 1315 1320 1325
 Leu Arg Phe Ile Thr His Ile Ser Lys Met Glu Pro Ala Ala Val Pro
 1330 1335 1340
 Pro Gln Ala Met Asn Ser Gly Ser Pro Ala Pro Gln Ser Asn Gln Val
 1345 1350 1355 1360
 Asp Thr Leu Thr

```

      500              505              510
Asn Cys Met Ala Ser Ala Ser Ile Thr Pro Leu Pro Met Asn Leu Leu
      515              520              525
Asp Ser Leu Thr Val His Ala Lys Met Ser Leu Ile His Ser Ile Ala
      530              535              540
Thr Arg Val Ile Lys Leu Ala His Ala Lys Ser Ser Val Ala Leu Ala
545              550              555              560
Pro Ala Leu Val Glu Thr Tyr Ser Arg Leu Leu Val Tyr Met Glu Ile
      565              570              575
Glu Ser Leu Gly Ile Lys Gly Phe Ile Ser Gln Leu Leu Pro Thr Val
      580              585              590
Phe Lys Ser His Ala Trp Gly Ile Leu His Thr Leu Leu Glu Met Phe
      595              600              605
Ser Tyr Arg Met His His Ile Gln Pro His Tyr Arg Val Gln Leu Leu
      610              615              620
Ser His Leu His Thr Leu Ala Ala Val Ala Gln Thr Asn Gln Asn Gln
625              630              635              640
Leu His Leu Cys Val Glu Ser Thr Ala Leu Arg Leu Ile Thr Ala Leu
      645              650              655
Gly Ser Ser Glu Val Gln Pro Gln Phe Thr Arg Phe Leu Ser Asp Pro
      660              665              670
Lys Thr Val Leu Ser Ala Glu Ser Glu Glu Leu Asn Arg Ala Leu Ile
      675              680              685
Leu Thr Leu Ala Arg Ala Thr His Val Thr Asp Phe Phe Thr Gly Ser
      690              695              700
Asp Ser Ile Gln Gly Thr Trp Cys Lys Asp Ile Leu Gln Thr Ile Met
705              710              715              720
Ser Phe Thr Pro His Asn Trp Ala Ser His Thr Leu Ser Cys Phe Pro
      725              730              735
Gly Pro Leu Gln Ala Phe Phe Lys Gln Asn Asn Val Pro Gln Glu Ser
      740              745              750
Arg Phe Asn Leu Lys Lys Asn Val Glu Glu Glu Tyr Arg Lys Trp Lys
      755              760              765
Ser Met Ser Asn Glu Asn Asp Ile Ile Thr His Phe Ser Met Gln Gly
      770              775              780
Ser Pro Pro Leu Phe Leu Cys Leu Leu Trp Lys Met Leu Leu Glu Thr
785              790              795              800
Asp His Ile Asn Gln Ile Gly Tyr Arg Val Leu Glu Arg Ile Gly Ala
      805              810              815
Arg Ala Leu Val Ala His Val Arg Thr Phe Ala Asp Phe Leu Val Tyr
      820              825              830
Glu Phe Ser Thr Ser Ala Gly Gly Gln Gln Leu Asn Lys Cys Ile Glu
      835              840              845
Ile Leu Asn Asp Met Val Trp Lys Tyr Asn Ile Val Thr Leu Asp Arg
      850              855              860
Leu Ile Leu Cys Leu Ala Met Arg Ser His Glu Gly Asn Glu Ala Gln
865              870              875              880
Val Cys Tyr Phe Ile Ile Gln Leu Leu Leu Lys Pro Asn Asp Phe
      885              890              895
Arg Asn Arg Val Ser Asp Phe Val Lys Glu Asn Ser Pro Glu His Trp
      900              905              910
Leu Gln Asn Asp Trp His Thr Lys His Met Asn Tyr His Lys Lys Tyr
      915              920              925
Pro Glu Lys Leu Tyr Phe Glu Gly Leu Ala Glu Gln Val Asp Pro Pro

```

```

65          70          75          80
Asp Cys Leu Ala Met Ala Val Glu Thr Gly Leu Leu Pro Pro Arg Leu
          85          90          95
Val Cys Glu Ser Leu Ile Asn Ser Asp Thr Leu Glu Trp Glu Arg Thr
          100          105          110
Gln Leu Trp Ala Leu Thr Phe Lys Leu Val Arg Lys Ile Ile Gly Gly
          115          120          125
Val Asp Tyr Lys Gly Val Arg Asp Leu Leu Lys Val Ile Leu Glu Lys
          130          135          140
Ile Leu Thr Ile Pro Asn Thr Val Ser Ser Ala Val Val Gln Gln Leu
          145          150          155          160
Leu Ala Ala Arg Glu Val Ile Ala Tyr Ile Leu Glu Arg Asn Ala Cys
          165          170          175
Leu Leu Pro Ala Tyr Phe Ala Val Thr Glu Ile Arg Lys Leu Tyr Pro
          180          185          190
Glu Gly Lys Leu Pro His Trp Leu Leu Gly Asn Leu Val Ser Asp Phe
          195          200          205
Val Asp Thr Phe Arg Pro Thr Ala Arg Ile Asn Ser Ile Cys Gly Arg
          210          215          220
Cys Ser Leu Leu Pro Val Val Asn Asn Ser Gly Ala Ile Cys Asn Ser
          225          230          235          240
Trp Lys Leu Asp Pro Ala Thr Leu Arg Phe Pro Leu Lys Gly Leu Leu
          245          250          255
Pro Tyr Asp Lys Asp Leu Phe Glu Pro Gln Thr Ala Leu Leu Arg Tyr
          260          265          270
Val Leu Glu Gln Pro Tyr Ser Arg Asp Met Val Cys Asn Met Leu Gly
          275          280          285
Leu Asn Lys Gln His Lys Gln Arg Cys Pro Val Leu Glu Asp Gln Leu
          290          295          300
Val Asp Leu Val Val Tyr Ala Met Glu Arg Ser Glu Thr Glu Glu Lys
          305          310          315          320
Phe Asp Asp Gly Gly Thr Ser Gln Leu Leu Trp Gln His Leu Ser Ser
          325          330          335
Gln Leu Ile Phe Phe Val Leu Phe Gln Phe Ala Ser Phe Pro His Met
          340          345          350
Val Leu Ser Leu His Gln Lys Leu Ala Gly Arg Gly Leu Ile Lys Gly
          355          360          365
Arg Asp His Leu Met Trp Val Leu Leu Gln Phe Ile Ser Gly Ser Ile
          370          375          380
Gln Lys Asn Ala Leu Ala Asp Phe Leu Pro Val Met Lys Leu Phe Asp
          385          390          395          400
Leu Leu Tyr Pro Glu Lys Glu Tyr Ile Pro Val Pro Asp Ile Asn Lys
          405          410          415
Pro Gln Ser Thr His Ala Phe Ala Met Thr Cys Ile Trp Ile His Leu
          420          425          430
Asn Arg Lys Ala Gln Asn Asp Asn Ser Lys Leu Gln Ile Pro Ile Pro
          435          440          445
His Ser Leu Arg Leu His His Glu Phe Leu Gln Gln Ser Leu Arg His
          450          455          460
Lys Ser Leu Gln Met Asn Asp Tyr Lys Ile Ala Leu Leu Cys Asn Ala
          465          470          475          480
Tyr Ser Thr Asn Ser Glu Cys Val Thr Leu Pro Met Gly Ala Leu Val
          485          490          495
Glu Thr Ile Tyr Gly Asn Gly Ile Met Arg Leu Pro Leu Pro Gly Thr

```

gttccagatg acacctacta ttgcagattg attggcagac tagtcgatac gatggctggc
 3360
 aaatctcctg gtccctttcc aaactgtgac tggagattca atgagtttcc caaccagct
 3420
 gcccatgctc tccatgttac ttgtgtggag ctcatggcct tggcagtttc aggcaaagaa
 3480
 gttgggaatg cccttctaaa tgttgtccta aaaagtcagc ctttagtgcc aagagagaac
 3540
 attacagcat ggatgaatgc aattggtttg atcatcactg ccctaccaga gccatattgg
 3600
 attgttcttc atgatogaat tgtgagtgtc atcagcagcc ccagcttgac gtctgaaaca
 3660
 gagtgggttg gctatccatt ccgcctcttt gatttcactg cctgtcatca gtctactct
 3720
 gagatgagtt gtagctatac gttagctctt gcacatgctg tgtggcacca ttctagcatc
 3780
 ggacaacttt ctctcattcc aaagtttctt actgaagtac ttcttcctat agtgaagacc
 3840
 gaattccagt tgctttatgt ataccatctt gttggaccat ttttaciaag atttcagcaa
 3900
 gagagaactc gttgtatgat agagattggg gtggcgtttt atgacatgct gctgaatgtt
 3960
 gaccagtgtg gcacccattt aaattacatg gatcccatct gtgacttcct ctatcacatg
 4020
 aagtatatgt ttactgggtga cagcgtgaaa gagcaagtag agaagattat ctgtaactta
 4080
 aaaccagctt taaaacttcg tcttcgattc atcacacaca ttagcaagat ggagccagct
 4140
 gcagtgcctc cacaagccat gaacagtggg tctccagcac ctgagtctaa tcagggtgac
 4200
 actctcacct gacagatgat gtaattcttc aatttttata atcttaaaat ttttaaattt
 4260
 tatatttgta aatacagtac acattttatt tcttggattt tgagagacat tgtaatttt
 4320
 gggggaattg gcattgcgaa agacttgaaa actaatgagt aaagtctgct gaatgaataa
 4380
 accaaaa
 4387

<210> 5214

<211> 1364

<212> PRT

<213> Homo sapiens

<400> 5214

Met	Glu	Thr	Gln	Leu	Gln	Ser	Ile	Phe	Glu	Glu	Val	Val	Lys	Thr	Glu
1				5					10					15	
Val	Ile	Glu	Glu	Ala	Phe	Pro	Gly	Met	Phe	Met	Asp	Thr	Pro	Glu	Asp
			20					25					30		
Glu	Lys	Thr	Lys	Leu	Ile	Ser	Cys	Leu	Gly	Ala	Phe	Arg	Gln	Phe	Trp
		35					40					45			
Gly	Gly	Leu	Ser	Gln	Glu	Ser	His	Glu	Gln	Cys	Ile	Gln	Trp	Ile	Val
	50					55				60					
Lys	Phe	Ile	His	Gly	Gln	His	Ser	Pro	Lys	Arg	Ile	Ser	Phe	Leu	Tyr

cccttaccta tgaacctcct ggattcactg acagttcatg ccaaaatgag ccttattcac
1740
agcattgcaa ccagggatgat aaaacttgct catgcaaagt ccagtgtggc cttggctcca
1800
gccctagtgg aaacttacag tcgtttattg gtctatatgg aaatagagtc tttgggcatc
1860
aaaggattta tcagtcagct tttgccaaact gtgttcaaact cacatgcatg ggggatctta
1920
cacacactcc ttgagatggt tagctaccgg atgcatcata ttcagcctca ttacagagtt
1980
cagctcctga gtcattctca tactttggct gcagttgcac aaacaaacca gaaccagctc
2040
catctttgtg tcgagagcac tgctctcagg cttataacag cattaggtag ctgagaggta
2100
caaccgcagt ttacacgctt ccttagtgat cccaaaacag tgctctcagc agaactctgaa
2160
gaactgaacc gagccttgat attgaccttg gctagagcaa ctcatgtaac agattttttt
2220
acaggctctg attcaattca gggaacttggt tgtaaagaca tacttcagac catcatgagt
2280
ttcactcttc ataattgggc ttcacacacc ctgagctggt ttccaggccc actacaggca
2340
ttcttcaaac aaaataatgt gcctcaggaa agccgtttta atctgaaaaa aaatgtggag
2400
gaggagtata ggaagtggaa gtcaatgagc aacgaaaacg acattattac ccacttctct
2460
atgcagggtt cccctcctct ctttctttgt cttctctgga aaatgctctt ggaaacagat
2520
catattaatc agattggcta tagagtatta gagagaattg gagccagggc cttggtagcc
2580
catgtgagga catttgca ga tttcctggta tatgagtttt ctacatcagc aggggggtcag
2640
caactcaata aatgcattga aattcttaat gacatgggtat ggaagtataa cattgttaca
2700
ctggacagat taattctctg cctggccatg cgtagtcacg aaggaaatga agcccagggt
2760
tgttatttca taattcagtt gctgttactc aaaccaaacg attttagaaa tcgagtaagt
2820
gactttgtga aggaaaattc cccagagcac tggttacaga atgactggca caccaagcac
2880
atgaattatc acaagaaata tccagagaag ttgtattttg agggcctcgc ggaacagggt
2940
gatcctcctg tacagatcca gtctccctat ctgcccctct attttgggaa tgtgtgtctt
3000
cgattccttc cagtatttga tatagtaatc cacagatttt tagagttgct tccggtatcc
3060
aaatcactgg agactctact ggatcatcta ggaggettat ataaatttca tgatcgtcca
3120
gtgacttate tgtataacac tctgcactat tatgaaatgc acctgagaga ccgcgcattt
3180
ctcaaacgaa aactcgcca tcgatcatt ggctctctga aggataatcg accgcagggc
3240
tgggtgtctaa gtgacactta cctgaaatgc gctatgaatg cacgagagga aaatccttgg
3300

cccgagtctg atccgggcct tgccgggcac cctggaaagg cgggggtgat agtacagatg
120
gagacgcaac tgcagagcat tttcgaagag gtggtgaaaa cggaagtat agaagaggct
180
tttcctggca tgtttatgga tactcctgaa gatgagaaaa caaaactaat tagctgtttg
240
ggggccttca gacagttttg ggggtggactt tctcaggagt ctcatgaaca gtgtatccag
300
tggattgtta agtttattca tggtcagcat agtcctaaaa gaatttcttt tctttatgac
360
tgcttagcaa tggcagttga gactggtctc cttccacca ggctggtttg tgaatccctg
420
ataaactctg acactcttga gtgggaaaga acacagcttt gggccttaac atttaaactg
480
gttcggaaaa taattggggg agtggattac aagggtgttc gagatctctt aaaagtgatt
540
ttggagaaga ttttgacaat tcctaataca gtgagctctg ctggtgtaca gcagcttctg
600
gcagcaagag aggttatagc atatatcttg gaaagaaatg cctgcttatt accagcctat
660
tttgacgtca ctgagatcag gaaactgtat cctgaaggca aacttcaca ctggttactt
720
ggaaacctag tatcagactt tgtggatacc ttcaggccca cagcaaggat aaactccatt
780
tgtggtcgct gtagtcttct gccagttgta aataattcgg gtgccatttg taattcatgg
840
aaactggatc ctgctactct tcgttttctt ttgaaaggcc ttttgccata tgataaggat
900
ctgtttgaac cacagactgc tttgttgaga tatgtattgg agcagcctta ttccagggat
960
atggtctgca atatgctagg tttaaataag cagcacaagc agcgtgccc tgtgctggag
1020
gaccagttgg tggatctggt tgtttatgcc atggagcgat ctgagaccga ggagaagttt
1080
gacgatgggg gaacaagcca actcctgtgg cagcatctct caagtcagct cattttcttt
1140
gtgcttttcc agtttgcaag tttccacat atggtgcttt ctcttcatca gaagttagca
1200
gggcgaggac tgattaaagg cagagatcat cttatgtggg ttctcctgca attcatttct
1260
ggaagtattc agaaaaatgc actagctgat tttctccctg tgatgaagct cttcgacttg
1320
ctataccag aaaaagaata tatccagtt cctgatatta acaaaccaca gtcaacccat
1380
gcctttgcaa tgacctgtat ttggattcat ctcaatagaa aagctcaaaa tgacaactcc
1440
aagctacaga ttccaatacc tcattcccta agacttcacc atgagttcct gcagcagagt
1500
ctaagacata aaagtttaca gatgaatgac tataagattg ctctatttg taatgcatac
1560
tctacaaatt cagaatgtgt tacattaccc atgggagctc tggtagaaac tatttatgga
1620
aatggaatta tgagactacc tctccctgga acaaactgta tggcttcagc atctattacc
1680

<400> 5211
gcagttcagt ctttgattgg ttgctgagag gcggggctac tcgactgctc tggaggtagc
60
ggccgcgggtg aggagagcca tgggacgggc agtcaagggtt ttacagctct ttaaaacact
120
gcacaggacc agacaacaag tttttaaaaa tgatgccaga gcattagaag cagccagaat
180
aaagataaat gaagaattca aaaataataa aagtgaact tcttctaaga aaatagaaga
240
gctaataaaa ataggttctg atgttgaatt attactcaga acatctgtta tacaaggat
300
tcacacagac cacaatacac tgaaactggt ccctaggaaa gaccttcttg tagaaaatgt
360
gccatattgt gatgcaccaa ctcaagaagca atgagttttc tagaatataa caagtctttg
420
tactttttta ctttaaaatc tacaactctg gcaaaagtcc tggaaatgca gacattttcc
480
ctgaactggc atattgaaaa tgaatgaatt acagaatagc ttcattatta aatttcattg
540
taaaagggtca ttactgagaa ctaaagaaca taattaagta tttctaaagg aaattagata
600
ag
602

<210> 5212
<211> 104
<212> PRT
<213> Homo sapiens

<400> 5212
Met Gly Arg Ala Val Lys Val Leu Gln Leu Phe Lys Thr Leu His Arg
1 5 10 15
Thr Arg Gln Gln Val Phe Lys Asn Asp Ala Arg Ala Leu Glu Ala Ala
20 25 30
Arg Ile Lys Ile Asn Glu Glu Phe Lys Asn Asn Lys Ser Glu Thr Ser
35 40 45
Ser Lys Lys Ile Glu Glu Leu Met Lys Ile Gly Ser Asp Val Glu Leu
50 55 60
Leu Leu Arg Thr Ser Val Ile Gln Gly Ile His Thr Asp His Asn Thr
65 70 75 80
Leu Lys Leu Val Pro Arg Lys Asp Leu Leu Val Glu Asn Val Pro Tyr
85 90 95
Cys Asp Ala Pro Thr Gln Lys Gln
100

<210> 5213
<211> 4387
<212> DNA
<213> Homo sapiens

<400> 5213
nnccgcggag ctacggtttc ctccagaggt ctccgccct ctgccctat attcccagaa
60

cccaccaaac catggtcctt taaggcacgc tcctgtcctc ctcattgccc agcagtaggg
 780
 aggggcaggg gtaaggggac ctgaggataa aggggtggga aacaggggcc cctgaggcct
 840
 gtgggggctg caggggagga ggatgtacct tgtgtctctt tcaagtgcct taatccgagc
 900
 cagcagggcc ttctgcttgc ctgctgccat actgtatgta ggaaagtgtt ctgtggctgc
 960
 tttgtgtcaa gaaaagagca gtcactctca gaatcttgat tccccatcag ccaaagcaaa
 1020
 agatggctgc tgctttgtag gcatgtgcct gcaagtggga ccttgctggg cattatatgc
 1080
 cctgtggggg ttccagagac cctgaaagag gaggaggagc ccgcctcctt gtctgcacaa
 1140
 ctgcatgcac ttctctcccc atcgctccac aacctgaaac cgagaaggag ttgctgacca
 1200
 gtgcccaccc cggcagcccg ggaggaacac aggcagctcc tttcccttca cgtggctctgc
 1260
 agagagcagg gtgagctgcc agctgccct ctccaccagg gtaccctgtc ttggtggtta
 1320
 gggggcactt ttcttttgag gctctagtgg aggtggatgt ccttctctgc caggcttggc
 1380
 acatgatgtg aagaataaat gcccaattct tactgttcag gtttgatgtg gaatcacagc
 1440
 tgcagtgata tatatTTTTT atcagtgcct ggttggtttt aaataaagtg cacgctatTT
 1500
 tattatcttg ttctgaataa aatgtattta ctccaaaaaa aaaaaaaaaa aaaaaaaaaa
 1560
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1592

<210> 5210

<211> 85

<212> PRT

<213> Homo sapiens

<400> 5210

Ile	Leu	Trp	Gly	Leu	Lys	Leu	Val	Ile	Phe	Leu	Ala	Gly	Phe	Val	Ala
1				5				10					15		
Leu	Met	Arg	Ser	Val	Pro	Asp	Pro	Ser	Thr	Arg	Ala	Leu	Leu	Leu	Leu
				20				25				30			
Ala	Leu	Leu	Ile	Leu	Tyr	Ala	Leu	Leu	Ser	Arg	Leu	Thr	Gly	Ser	Arg
			35				40				45				
Ala	Ser	Gly	Ala	Gln	Leu	Glu	Ala	Lys	Val	Arg	Gly	Leu	Glu	Arg	Gln
			50			55				60					
Val	Glu	Glu	Leu	Arg	Trp	Arg	Gln	Arg	Arg	Ala	Ala	Lys	Gly	Ala	Arg
65					70				75					80	
Ser	Val	Glu	Glu	Glu											
				85											

<210> 5211

<211> 602

<212> DNA

<213> Homo sapiens

<211> 136

<212> PRT

<213> Homo sapiens

<400> 5208

```

Met Val Ser Thr Tyr Arg Val Ala Val Leu Gly Ala Arg Gly Val Gly
 1           5           10           15
Lys Ser Ala Ile Val Arg Gln Phe Leu Tyr Asn Glu Phe Ser Glu Val
      20           25           30
Cys Val Pro Thr Thr Ala Arg Arg Leu Tyr Leu Pro Ala Val Val Met
      35           40           45
Asn Gly His Val His Asp Leu Gln Ile Leu Asp Phe Pro Pro Ile Ser
      50           55           60
Ala Phe Pro Val Asn Thr Leu Gln Glu Trp Ala Asp Thr Cys Cys Arg
      65           70           75           80
Gly Leu Arg Ser Val His Ala Tyr Ile Leu Val Tyr Asp Ile Cys Cys
      85           90           95
Phe Asp Ser Phe Glu Tyr Val Lys Thr Ile Arg Gln Gln Ile Leu Glu
      100          105          110
Thr Arg Val Ile Gly Thr Ser Glu Thr Pro Ile Ile Ile Val Gly Asn
      115          120          125
Lys Arg Asp Leu Gln Arg Gly Arg
      130          135

```

<210> 5209

<211> 1592

<212> DNA

<213> Homo sapiens

<400> 5209

```

atcctgtggg gcctgaagct tgtcatcttc ctggccggct tcgtggccct gatgaggtcg
60
gtgcctgacc cttccaccgc ggccctgcta ctccctggcct tgctgatact ctacgcctcg
120
ctgagccggc tcaactggctc ccgagcctct ggggcccaac tcgaggccaa ggtgcgaggg
180
ctggaacgcc aggtggagga gctgcgctgg cgccagaggc gagcggccaa gggggccgcg
240
agtgtggagg aggagtgagc cggatgcccc acacaccgcc agtgtcatac caaagagctg
300
agctgcttcg gggccatgca gcctcctgc cagccccctg cccttttctt gccctgtctc
360
tgaaccttca gaacattgat ccttgccgca gcccactag ccaagagaaa cagagaaaga
420
ccattccccc tgctgtcct tgcggccctg tcttctgagg ttctctgtct ggggttggtc
480
ctcttaaccc tttctctgct ccagcctgc ctaccaggg aagggttgag gggcctccct
540
ctggcttctg catctgcgcc agcaaacatc actgccgttg gtctctcatg acttaactgg
600
cttccctctg ctgtgcctt ggcttccctc taatgctcgt gctctcctgt ccttctgaag
660
ttgtccttg gccaaatctc cagctccctt cttgttttcc tcatectcct accctgtact
720

```

```

      50              55              60
Ile Val Lys Leu Tyr Ala His Lys Gly Asp Ala Val Thr Val Tyr Val
65              70              75              80
Ser Gly Gly Asn Pro Ile Leu Phe Glu Leu Glu Lys Asn Leu Tyr Pro
      85              90              95
Thr Val Tyr Thr Leu Trp Ser Tyr Pro Asp Leu Leu Pro Thr Phe Thr
      100             105             110
Thr Trp Pro Leu Val Leu Glu Lys Leu Val Gly Gly Ala Asp Leu Met
      115             120             125
Leu Pro Gly Leu Val Met Pro Pro Ala Gly Leu Pro Gln Val Gln Lys
      130             135             140
Gly Asp Leu Cys Ala Ile Ser Leu Val Gly Asn Arg Ala Pro Val Ala
145             150             155             160
Ile Gly Val Ala Ala Met Ser Thr Ala Glu Met Leu Thr Ser Gly Leu
      165             170             175
Lys Gly Arg Gly Phe Ser Val Leu His Thr Tyr Gln Asp His Leu Trp
      180             185             190
Arg Ser Gly Asn Lys Ser Ser Pro Pro Ser Ile Ala Pro Leu Ala Leu
      195             200             205
Asp Ser Ala Asp Leu Ser Glu Glu Lys Gly Ser Val Gln Met Asp Ser
      210             215             220
Thr Leu Gln Gly Asp Met Arg His Met Thr Leu Glu Gly Glu Glu Glu
225             230             235             240
Asn Gly Glu Val His Gln Gly Thr
      245

```

<210> 5207

<211> 594

<212> DNA

<213> Homo sapiens

<400> 5207

```

ncggccggcc agggcagggg gcacctagga cggccccggt ccaggtggag gccgcagagg
60
gcccagggca agcagaggca gcaatggttg gtcctgacgg tggctgagcc cccagcccct
120
ggaatatgca gcccggggga gcccagaca gcggcaagga cgaggtggcg gagtggggcg
180
ggaggcatgg tctccaccta ccgggtggcc gtgctggggg cgcgaggtgt gggcaagagt
240
gccatcgtgc gccagttctt gtacaacgag ttcagcgagg tctgcgtccc caccaccgcc
300
cgccgccttt acctgcctgc tgctgcatg aacggccacg tgcacgacct ccagatcctc
360
gactttccac ccatcagcgc ctccctgtc aatacgctcc aggagtgggc agacacctgc
420
tgcaaggggac tccggagtgt ccacgcctac atcctggtct acgacatctg ctgctttgac
480
agctttgagt acgtcaagac catccgccag cagatcctgg agacgagggg gatcggaacc
540
tcagagacgc ccatcatcat cgtgggcaac aagcgggacc tgcagcgcgg acgc
594

```

<210> 5208

gaagacacca gcaccagggg cctgaaccaa gactccacag atagcaaaac gcttcaagaa
 900
 caaatggatg agctgttaca gcaatgcttc ttacatgcct tgaagtgcg agtcaaaaag
 960
 gctgacctcc ctttactcac cagcactttc cttggcagcc acatgttctc ctgctgcccc
 1020
 gaangacgac aactggacat aaagaagtca agctacaaaa agctctctaa gttcctgcag
 1080
 caaatgcagc aggagcagat tatacaggtg aaggagctga gcaaaggggt ggagagcatt
 1140
 gtggctgtgg actggaaaca cccgaggatt acatctttcg tcatacccca gccctccccg
 1200
 acctcccaga ctatccagga gggtagcagg gaacagccct atcacccctcc agatataaaa
 1260
 cccctctact gtgtcccagc cagcatgacc ctgctcttcc aggagtctgg ccacaagaag
 1320
 gggagctttc tggagggcag tgaggtccga acgatcgta ttaactacgc caagaaaaat
 1380
 gacctggttg atgcagacaa caaaaatctt gtgagattgg atcccatcct atgtgactgc
 1440
 atcttagaga aaaatgaaca gcatacagtc atgaagcttc catgggacag tcttctgacc
 1500
 aggtgttttg aaaaattaca gcctgcctat caagtgacct ttcccggaca agagccatt
 1560
 gtgaagaaag ggagaatctg tccaattgac atcacccctag cacaaagagc gtctaataaa
 1620
 aagggtgaccg tgggtccgaa cttggaggcc tatgggtctgg acccatactc agtgggtgcc
 1680
 atccttcagc agcgatgcca ggctagcacc accgtcaatc ctgcccctgg ggccaaggac
 1740
 agccttcagg tgcagatcca gggaaaccag gtccaccacc tcgggtggct attgcttgaa
 1800
 gagtatcagc tccctcgaaa acacatccaa ggtctagaaa aggccctcaa acctggcaag
 1860
 aagaagtgac agactctttt gtctcacgtg gtggatccgg tggaaatcca agctctgggc
 1920
 tggtaatttt tatgagcatt ttcagctttt gcaaatacaa aatataattc ttacaaaaa
 1980
 taaattttta ttctgatcta aaaaaaaaaa a
 2011

<210> 5206

<211> 248

<212> PRT

<213> Homo sapiens

<400> 5206

His	Ser	Leu	Ala	Ser	Val	Leu	Ser	Ser	Pro	Gly	His	Pro	Ser	Arg	His
1				5					10					15	
Val	Ala	Lys	Ala	Phe	Arg	Val	Lys	Ser	Asn	Thr	Ala	Ile	Lys	Gly	Ser
			20					25					30		
Asp	Arg	Arg	Lys	Leu	Arg	Ala	Asp	Val	Thr	Thr	Ala	Phe	Pro	Thr	Leu
			35				40					45			
Gly	Thr	Asp	Gln	Val	Ser	Glu	Leu	Val	Pro	Gly	Lys	Glu	Glu	Leu	Asn

	100		105		110										
Gln	Leu	Glu	Ala	Glu	Ile	Glu	Glu	Thr	Tyr	Ala	Asn	Phe	Ile	Lys	His
	115					120					125				
Asn	Asp	Gly	Lys	Asn	Ile	Phe	Tyr	Ala	Ala	Arg	Thr	Pro	Ala	Thr	Leu
	130					135					140				
Phe	Ala	Val	Met	Phe	Ala	Met	Tyr	Ile	Ile	Ser	Gly	Leu	Thr	Gly	Phe
145					150					155					160
Ile	Gly	Leu	Asn	Ser	Ile	Ala	Val	Leu	Cys	Asn	Leu	Val	Met	Gly	Leu
			165					170						175	
Ala	Leu	Ile	Phe	Leu	Cys	Thr	Trp	Ala	Tyr	Val	Lys	Tyr	Ser	Gly	Glu
	180							185					190		
Phe	Arg	Glu	Ile	Gly	Thr	Val	Ile	Asp	Gln	Ile	Ala	Glu	Thr	Leu	Trp
	195						200				205				
Glu	Gln	Val	Leu	Lys	Pro	Leu	Gly	Asp	Asn	Leu	Met	Glu	Glu	Asn	Ile
	210					215					220				
Arg	Gln	Ser	Val	Thr	Asn	Ser	Ile	Lys	Ala	Gly	Leu	Thr	Asp	Gln	Val
225					230					235				240	
Ser	His	His	Ala	Arg	Leu	Lys	Thr	Asp							
					245										

<210> 5205

<211> 2011

<212> DNA

<213> Homo sapiens

<400> 5205

cggccgggcc ccagcatggg tgtccccacg gctgagggcc tggcagctgc tgcgccctcg
 60
 ctttcttgac attccctggc ttctgtgtct tcttccccag gccaccccag cagacatggt
 120
 gccaaaggcct ttcgggtcaa gtccaacacg gccatcaagg ggtcggacag gagaaagctt
 180
 cgagctgatg tgacaactgc tttccccacc cttggaactg atcaagtctc tgagttagta
 240
 cctggaaagg aggagctcaa cattgtgaag ttgtatgtct acaaagggga tgcagtgact
 300
 gtgtacgtga gtggtggtaa ccccatcctc tttgaactgg agaaaaatct gatatcaaca
 360
 gtgtacacgc tgtggtccta tctgatctt ctgccaacct ttacaacatg gcctctggtg
 420
 ctcgagaaac tggtaggggg agcagatttg atgtgcctg gactggtgat gccccctgct
 480
 ggtctgcctc aggtacagaa gggcgacctc tgtgccattt ctttggtggg gaacagagcc
 540
 cctgtagcca ttggagtgc agccatgtcc acagctgaga tgctcacgtc aggcctgaag
 600
 ggaaggggct tctctgtgct ccacacttac caggaccact tgtggcggtc tggaaacaag
 660
 tctctccac cttccattgc tccactggcc ctggattcag cagatctcag tgaagagaag
 720
 gggctgtcc agatggactc caccctgcag ggagacatga ggcacatgac cctggagggg
 780
 gaagaggaga atggggaggt tcaccagggc acgtgaagac aatctctctc agaagcccca
 840

ttgtttgtta gttttaagca ttcttttaaat ggctcctaag acatgcagat ggactgagga
 960
 gcattgggta atcatgcacc tttgtgccat gtttaactct tttatttttt tttacttaat
 1020
 ctaatgttag tgaatttgtc ttatgtaaaa ggatatttca gggaaatatt ttcagaaatc
 1080
 tatttagagt ctctttaaca cagtgtccca ttgaaatttt aattttttaga gaatttatga
 1140
 atcactgttt caagaaccag attggaaaga caatgaagcc tttattgagc cactacatta
 1200
 aaagtatata ttgctttact gccttcaata ccagtattac atcaatgcat gtatcagaaa
 1260
 cttcacagaa attacatggc aactcttgta gctaagaaag taattctgag gtgtacattt
 1320
 gtcttgccct tttaaattta taaacttgcc ctaaaaggag atgcatatct gggaaactga
 1380
 actgtctttt tgcagtttag ccttcatgta tataaaatat gccattaatt ttattgggga
 1440
 agaaattcca tccaaaaatg ttgcctacag ctatgagtta agagtgtctg tacagtgtgt
 1500
 agcttttatt ttctaaaatc acagataggg catgtatatg acctataaat atataaatac
 1560
 gattttgtat taaaagtttt gtagtttatg gcaaaatctg gtcctgtggt aggctaaata
 1620
 agtacagtcc ctgtgaaagg aatgtttgtg gctcatgtca gtgtgtgaat gcatagacaa
 1680
 tttgaagttt ttgatattt tgtgatattt atcttgagca ctgcaatctc accccccccc
 1740
 cccaccaag ggaattcaat gggaatgttt attgtgactt tgcctctgtg tgcattttaa
 1800
 agttatttcc tgtaatttat tttcagtaca taattaaaaa tttgttgat atataaaaaa
 1860
 aaa
 1863

<210> 5204

<211> 249

<212> PRT

<213> Homo sapiens

<400> 5204

Glu	Asn	Leu	Val	Glu	Lys	Glu	Ile	Ser	Gly	Ser	Lys	Val	Thr	Cys	Arg
1				5					10					15	
Asp	Leu	Val	Glu	Tyr	Phe	Lys	Ala	Tyr	Ile	Lys	Ile	Tyr	Gln	Gly	Glu
			20					25					30		
Glu	Leu	Pro	His	Pro	Lys	Ser	Met	Leu	Gln	Ala	Thr	Ala	Glu	Ala	Asn
			35				40					45			
Asn	Leu	Ala	Ala	Val	Ala	Gly	Ala	Arg	Asp	Thr	Tyr	Cys	Lys	Ser	Met
			50				55				60				
Glu	Gln	Val	Cys	Gly	Gly	Asp	Lys	Pro	Tyr	Ile	Ala	Pro	Ser	Asp	Leu
65				70					75					80	
Glu	Arg	Lys	His	Leu	Asp	Leu	Lys	Glu	Val	Ala	Ile	Lys	Gln	Phe	Arg
			85						90					95	
Ser	Val	Lys	Lys	Met	Gly	Gly	Asp	Glu	Phe	Cys	Arg	Arg	Tyr	Gln	Asp

<213> Homo sapiens

<400> 5202

```

Ser Pro Gly Pro Arg Gly Leu Pro Glu Gly Pro Gln Ala Leu Gly Arg
 1           5           10           15
Val Ala Val Gly Gly Gln Val His Cys Pro Glu Val Leu Ser Ala Leu
      20           25           30
Ser Gln Gly Ser Leu Glu Arg Gly Leu Ala Gly Leu Gly Gly His Arg
      35           40           45
Pro His Ser Gly Leu Pro Ala Gln Gly Arg Arg Pro Glu Pro Val Trp
      50           55           60
Pro Cys Ser Pro Gly Gln Ser Trp Ala Cys Arg Val Phe Leu Pro Gly
65           70           75           80
Arg Cys Arg Cys Trp Pro Ser Ala Gly Gly Arg Arg Trp Glu Ser Trp
      85           90           95
Ile Phe Cys Phe Phe Leu Ser Phe Phe Phe Leu Arg
      100           105

```

<210> 5203

<211> 1863

<212> DNA

<213> Homo sapiens

<400> 5203

```

gaaaatttgg tagaaaaaga gataagtgga tctaaagtca cttgtagaga tctttagtaa
60
tattttaagg cttacatcaa aatctatcaa ggagaagaac ttccacatcc aaagtccatg
120
cttcaggcaa cagctgaagc taataatctt gctgcagtag caggagcaag agatacctat
180
tgtaaaagta tggaacaggt atgtggaggg gacaagcctt acattgcacc ttcagatctg
240
gagcgaaaac acttgatct caaggaagtg gcgataaaac aatttcgttc agtaaaaaag
300
atgggtggag atgagttctg ccgtcggttat caggaccagc ttgaagctga aattgaagaa
360
acctatgcaa attttataaa gcacaatgat ggcaaaaata tcttctatgc tgctcgtagc
420
ccagccacac tgtttgcggt catgtttgct atgtatataa tctcaggact gactggcttc
480
attggcctaa actctatagc tgtcttgtgt aaccttgtca tgggggttagc actgatattt
540
ctttgtactt gggcatatgt taaatactct ggggagttca gagaaattgg aacagtgatt
600
gatcagattg ctgaaacact atgggaacag gtattgaagc ccctgggtga taatttgatg
660
gaggaaaaca taaggcagtc tgtaacaaac tctatcaaag caggcctgac tgaccaggtg
720
tctcatcatg ccagattaaa gacagactga cagttcatct cctcaaggac tccactctct
780
ttttttttca tgcttgctgt acaatgagaa ctcaaataaa aataaaccaa agtttacaat
840
caactgtaga agtagtttag tgtaactggc ttcacagatg gctgccacag agtgtgaaga
900

```


tctcctgctg ggggctttct gtcgcatgtg tgtctcctgt cgactctgca gtttgcttc
4680
agagcagaat gtttctgtt ctcaatgcac aaagacactg gttttcaatc ggcttctaaa
4740
accacgttcc tgcctttcat tgcaacacgg tgtgttcatt tgtttaaaac agtttaatga
4800
gtaagtttag atgactgggc aatatcttaa aaatgtatat tagtaagaag ttcttctg
4860
aatttttctt tgcattctgg cagaataaac aggtgttttt agttttccca ctgtctgagc
4920
caagcaggac cctgtcccag agcaagagat gtccccttcc atctctgacc cttgcctggg
4980
acaagctttg atggggggcc ccagcttcaa ggctgtgggt ggaacagcac ccccaaatgc
5040
cagcctctcc tttcttccca tccaccagta tactgcgggg ccatttctgg tctttgtcca
5100
acaggaaacc catttctggt gggatatgcc ttccagtgcc acagggccac tcaccccatg
5160
catctctgtc ctgcccgtca gtgctgggac ggacagcaag ggcaagccca gtgtctggcg
5220
gataggtggg tgggaacaga gaggggagaa tgccgtccta agcttctgct tggggatccc
5280
ccacacgacc tgggtactgc ctgggaaacc tgtcctaagt aaaactatgg acctgcctc
5340
gcccaccggc ctggaagcc agcatctccg tgaaggtgga tggaagcgcc tttgtcctca
5400
ctttgagctg caagctgggt cagcggctct gaagccctcg agtgactttc taaccaaga
5460
cccagcccct ggcaggagga ggggtgggtgc agggctgggt ggacaaaaag aggcctcagc
5520
aggcctggaa gacccttcca gtacatccca cagcgtgtcg agcagctggg agaacctgtg
5580
tcaaagctga gccgtcatag gtcccatga ggtgtctgaa gccccttctt ggtgatggga
5640
ggcagagggt ctgacgttct ggagcatgga cgtgagtcct cagctggctc cgcgtgggcc
5700
cttgagggt gccagggtg tggtgacctt ctggatgect ttaacttcat ggctgcgtca
5760
ttcctgattt agaactttaa ccggagcttc atctagtgat tgcaaaactg gaccaatggg
5820
aggacggcgg cgcagcccg tccctccgtg gaatggagct cagctcttcg gaggcacaa
5880
agcacctgtc gcctccgtgg tccccctgcc gagggagtgc ggcctctgca aggttcgggg
5940
gtggcttcgt ttgcctggag tggccggccc tgcttggtgc atgtggatgt ttgtgagcct
6000
cggtcctaca gcactgtgta ggctgcatct gtttctgtgt ggtcctgttg acttgatga
6060
taccacaaa taaatatttt catggcggta aaaaaaaaaa aaaa
6104

<210> 5202

<211> 108

<212> PRT

agagcccaca gtaggtgcag ggtgcaaggc cctgggaggg cactggccag ggaaggtggt
3060
atagatggcc ctcagattgc ggggccccga gcagctcccc actctgcccc tccaccttcc
3120
ctggctccag cctcattctc tctttagttt aactatgcaa agagaggagg ttgagagtgt
3180
tctggcagct ggagctcttt tccttgtcct tcctgccctc cgatggggcc acctgtgtcg
3240
gggcagcagt gtccatgttt atggagatca gaggtgtccc cactgtgtgg ctggactgta
3300
ctctgctgcc cgggtagcca ggagtctctc cctctctccc ctgcgcctg cctgggtctca
3360
tgggcctcct tcacacaccc ctccctgtgg atcgctgcc tgggcccaga gcaggggaac
3420
tggagtttgt gagtgcagc agcaggttat gtgcagacag ggaaacgaga actttggacc
3480
tggctttctg agtccaggtg agagctgtgt ggccccccga tgccactctg cccgcggag
3540
ggatgtgcct gctgagcctt ttccttccac gccgcctctc actgccaggc cagcggcttc
3600
cgctgagact cgctggagag gcggctcccc tgtccgtcca ccgagcactc agatggatgc
3660
tgatcaccag ggccgagggg gctcccagaa ggaccccagg ccctggggag ggtggctgtg
3720
ggaggccaag tccactgccc ggaagtcttg tcagccctaa gccaggggaag cctggagcgt
3780
ggcctggcgg gtctgggtgg acaccgtccc cactccggac tcccagcaca ggggaggaga
3840
cctgagcctg tatggccctg tagccctggg cagagctggg cctgtcgtgt gttcctgcct
3900
ggcaggtgca ggtgctggcc atctgcagggt ggaaggagggt gggaatcttg gattttttgt
3960
ttttttttgt cttttttttt tttgagatga agtctcgctc tgnacacca ggctggcgtg
4020
cagtgggtgt atctcgctc actgcaaact ccgcttctcg ggttcaagtg gttctcctgc
4080
cccagcctcc caagtagctg ggattacagg catgagccac cacgctcagc tgatttttgt
4140
attttttagta gagatggggg ttcacatgt tggccaagct ggtctcaaac tcctgacctc
4200
aagtgatctg cccgcctcgg cctcccagag tgctgggatt acaggcgtga gccagtgcac
4260
ccggcggaat cttggaattt ttatagacag cacctcagtt tctgactcca gccgcacacc
4320
tcctgcctct accagcaggg gttgccgcca gaccagagcc agggccagggt ccctgcgtcc
4380
atcccccccg gtaggatgga cgtgagccat cttctaggg gacttttttc agtgtgcgac
4440
tcgtctctgt taggtggtag gagccagttt gtgtggcctg tgccacgctc cacagtgcgt
4500
ggctgggctc tgtgtgtggc ctgtgtcccc tgtccctgca ggaccagca ggcacgtgg
4560
cgtgacagct gtgtccaagc cactgcccg gcatcccatc acccaccagg gtgcacggtc
4620

ggtttatatg gaacccccac cccctccccc actctcccac tctgttcggt ctgaatgtct
1440
tcacgagcgt gcatcagggc gcctggctcc cccacctcag ccagtgagtc agacacgggt
1500
ttcgcagcca tgtttctctg ctccgaggac acgggtggca ggcccgttgc agcccagagc
1560
cactgggtccc tacagggcgc cgccacacca gcaggaagga ggatggctgt gtccggagcc
1620
tggcggggag ggcgcctccc cagtatgtga gtgcagggat ctgccagaac cacctggccc
1680
tctgtagggc gtttaactgg aaataccctc actgccagt ggagactggg gcgtgtgcc
1740
cattgccagc caccaggaaa gcttttcttt ttcttttttt tttttttttt aaacaccaag
1800
agcacgtata gcatggggga aagaacctaa atgtctctct gtccctgtgag ctggtgaaaa
1860
accagcatg agaacgcagt gtcagggtgt ggactccttc tgcccctgca gtgggtgtta
1920
cgggcgggtgt gccctggcga gcaagctttg attcttggtt ctttgagctc gtttcagagg
1980
ctgagtcctc acatcagctt tagttcttgg acttcctgtg attaagcaag aattaggaga
2040
atggctgtcc ctgcaggcgc ctcccgtaaa tcctgagctc tctggcgcaa tctgaaactt
2100
ctcttctgtt ttctttggct gtatcagccg aaccaggaga ggccctgggt gcgactaagg
2160
agaaaagaaat cgggggtttc tgagagcaga tgggtgcctt gtgggtgcag ggcttttgtg
2220
gaaattgtca gcctctacgg gcagagtccg gcatccctc cccagactgc ctgctgtcaa
2280
accacggagc agctggagcc tgccctgtcc acggcccgtt tccaccggg catgttcgtc
2340
tctcatgact tcggcagagg cccctgggtg ccttcagttt cagtttctca tccaggaagg
2400
taaccttggg cattggcagt gggtttccct atggcttga tccagattag aattgatctt
2460
tgttttcact ttccatagtt aataacatgc aaaataatga gaagaattta ttttaagggtg
2520
acagctatac tggccaaca tcgcctgctt attgtcaggg tacagaagtt taatactttc
2580
ttaatccagt ttttcaaact tctccctgta gaccgtaagg atgaattcca caataggatc
2640
ctttttaaaa tcgattttta attgttgctt agtctgcca aggttattat gtgcatctgt
2700
tatttttcca atacatgtaa acagttgcag catgatgctt tgtttaatgt cctgttctta
2760
agctcgtag agccagtttt gaaacgtttg gtcttaccgt gaacggaggc tggcttggct
2820
tagccacgct gatgagtaag tgagggatgt ctccatcttg agatcaccag gcaagagagt
2880
tgctgcacc aggtgaagagg ccaaagcccc tggggtaaca gtccccaccg ctaccagagg
2940
taaaacaata aaagctatgt ggttgagctc aggcctctcg tgccctgggt cagagaaggc
3000

355

<210> 5201

<211> 6104

<212> DNA

<213> Homo sapiens

<400> 5201

nngtgccagt cgtgctttgt gaaaaataac aaagtgggtca cagaaatttg tgatctgaaa
60
acccggctcc cttccccaca aggctcctgg gcctccggga agacggggccc ctgtttgcc
120
tctcgggggt gttccctgtg ggaggggtgag tgggtgaggc cgagcctgct gcgtgtggag
180
cctcgagtgg gccctggctg ccactaccgc acagaggcgc tgtcgcgctg ggctgggctt
240
gggtggcctc tgtctttgca tctctgagaa ggagtcgggt ggtaacgggt ggggtcagga
300
agaattctgc caagtatctt tactgtcatt ctgaccatag cctctttggt cccgcattcg
360
aacttttggg tottactttg ctgctcgttt agtccttggg gatttcagat cttaggctgt
420
tgtttcaccg tatgggaggg ttgatgtgag cttgcttgga gacacacggg gcagcatcag
480
ggaccttccc agggcccagc aaattcaagt cggctctgag acctctcagc taccgcggg
540
acctcttgta acccatcggc atcttccagg aatccgccga gtgacttgag gaagatgcta
600
acgcagtaag gtctgtgctg ggccaagagc agctttgaag ctccagagaa ccaccccgtc
660
aggttccttg tggaagctcc cctcatccgt ggtgcagcag gctgagcact gcgcgtttgc
720
cacgtgctgc ccgtgacagc acattgagcc acagcatttg tagacaggac agaggggtgc
780
ctgccccctg cccctgctgg cacatttaac ccttggtccc tgacctcagt tctgtgcccc
840
accaaatgcc caggggcaag agggccacct ggaagctgcc aatcttcaa ggtgggtgtg
900
gggcacggtg ggggcgggca gctcccaggc ccttgggcag gctgggggtga cggcagaggc
960
cacagcacca gctctgacaa gtccatcat cctctgctca gcagcgacct cctggcccc
1020
actttgccc gagtttgggg tccccccagg tatagctata ggcggcagt cctgtccctg
1080
gcctgccttg atttcagcca caccctgca gccctgcac ccagctctgg ggtgtgcaga
1140
ggtttgtgtc tccagggaac acacggctgg agagaaatag ggagatgcag gaagtggggg
1200
cccatggggc cccaagaag cggactctcc aaggggtacc cccacccgc taccttcccc
1260
acggacgggc ccctcctgga gcccataccc tctgtgagg ccattccagt gtcttctaga
1320
aagactcgct tgccaggagt gcgttctttg ttgaaaaatg cctgaagcg aaaagatgca
1380

attaaaaaaaa aa

1332

<210> 5200

<211> 358

<212> PRT

<213> Homo sapiens

<400> 5200

Met Ala Val Lys Trp Thr Gly Gly His Ser Ser Pro Val Leu Cys Leu
 1 5 10 15
 Asn Ala Ser Lys Glu Gly Leu Leu Ala Ser Gly Ala Glu Gly Gly Asp
 20 25 30
 Leu Thr Ala Trp Gly Glu Asp Gly Thr Pro Leu Gly His Thr Arg Phe
 35 40 45
 Gln Gly Ala Asp Asp Val Thr Ser Val Leu Phe Ser Pro Ser Cys Pro
 50 55 60
 Thr Lys Leu Tyr Ala Ser His Gly Glu Thr Ile Ser Val Leu Asp Val
 65 70 75 80
 Arg Ser Leu Lys Asp Ser Leu Asp His Phe His Val Asn Glu Glu Glu
 85 90 95
 Ile Asn Cys Leu Ser Leu Asn Gln Thr Glu Asn Leu Leu Ala Ser Ala
 100 105 110
 Asp Asp Ser Gly Ala Ile Lys Ile Leu Asp Leu Glu Asn Lys Lys Val
 115 120 125
 Ile Arg Ser Leu Lys Arg His Ser Asn Ile Cys Ser Ser Val Ala Phe
 130 135 140
 Arg Pro Gln Arg Pro Gln Ser Leu Val Ser Cys Gly Leu Asp Met Gln
 145 150 155 160
 Val Met Leu Trp Ser Leu Gln Lys Ala Arg Pro Leu Trp Ile Thr Asn
 165 170 175
 Leu Gln Glu Asp Glu Thr Glu Glu Met Glu Gly Pro Gln Ser Pro Gly
 180 185 190
 Gln Leu Leu Asn Pro Ala Leu Ala His Ser Ile Ser Val Ala Ser Cys
 195 200 205
 Gly Asn Ile Phe Ser Cys Gly Ala Glu Asp Gly Lys Val Arg Ile Phe
 210 215 220
 Arg Val Met Gly Val Lys Cys Glu Gln Glu Leu Gly Phe Lys Gly His
 225 230 235 240
 Thr Ser Gly Val Ser Gln Val Cys Phe Leu Pro Glu Ser Tyr Leu Leu
 245 250 255
 Leu Thr Gly Gly Asn Asp Gly Lys Ile Thr Leu Trp Asp Ala Asn Ser
 260 265 270
 Glu Val Glu Lys Lys Gln Lys Ser Pro Thr Lys Arg Thr His Arg Lys
 275 280 285
 Lys Pro Lys Arg Gly Thr Cys Thr Lys Gln Gly Gly Asn Thr Asn Ala
 290 295 300
 Ser Val Thr Asp Glu Glu Glu His Gly Asn Ile Leu Pro Lys Leu Asn
 305 310 315 320
 Ile Glu His Gly Glu Lys Val Asn Trp Leu Leu Gly Thr Lys Ile Lys
 325 330 335
 Gly His Gln Asn Ile Leu Val Ala Asp Gln Thr Ser Cys Ile Ser Val
 340 345 350
 Tyr Pro Leu Asn Glu Phe

```

<400> 5199
nnactagtgc agagtgttta gagatcactc agttttttaa gactggcctt tatcgtgtct
60
cagtgcagcc gaggcagagc ctttgaagga tgcgatgttg tcattcttac taatctagtc
120
cagccgctga ggtgactttc aacggcagac cgtctcctga gcgccccagg tagaatttca
180
aaagtctccg ggaccattat ggcagtcaag tggacgggtg ggcattcttc tctgtctcct
240
tgcttgaatg caagtaaaga agggctgctg gcttctggag cagagggcg ggcagatcacg
300
gcttgggggtg aagatggaac tccattagga cacacgcggt tccaaggggc tgatgatgtt
360
accagtgtct tattttctcc ctctgtccc accaagctct atgcctcaca tggagaaacc
420
attagtgtac tggatgtcag gtccctcaaa gattccttgg accattttca tgtgaatgaa
480
gaagaaatca attgtctttc attgaatcaa acggaaaacc tgctggcttc tgctgacgac
540
tctggggcaa tcaaaatcct agacttgga aacaagaaag ttatcagatc cttgaagaga
600
cattccaata tctgtctctc agtggctttt cggcctcaga ggcctcagag cctgggtgtca
660
tgtggactgg atatgcaggt gatgctgtgg agtcttcaaa aagccccgacc actctggatt
720
acaaatttac aggaggatga aacagaagaa atggaaggcc cacagtcacc tggtcagctc
780
ttaaaccttg ccttagccca ttctatctct gtggcttcgt gtggtaatat ttttagttgt
840
ggtgcagaag atggtaaagt tcgaatcttt cgggtgatgg gagttaagtg tgaacaggaa
900
ctgggattta agggccacac ttcaggggta tcccaggtct gctttctccc agaatectat
960
ttgctgctta ctggagggaa tgatgggaag atcacgttgt gggatgcaaa cagtgaagtt
1020
gagaaaaaac agaagagtcc cacaaaacgt acccacagga agaaaccta aagaggaact
1080
tgcaccaagc aggggtgaaa tactaacgct tcagtaacag atgaggaaga acatggcaac
1140
attttaccga agctaaatat tgaacatgga gaaaaagtga actggctctt gggtagaaaa
1200
ataaagggac accaaaatat attagtagct gatcaaaacta gttgtatatc tgtatacccc
1260
ttaatgaat tttaaatcca ataaaaacat ttgaagaatt gtggcaaac tgtttttcag
1320

```

gagcgccgag cccgggagga gaggctggcc gcctgtgctg ccaaactcaa gcagctggac
 720
 cagaagtgtg agcaggcacg aaaggcaggt gagggcccga agcaggcaga gaaggaagtg
 780
 ccctgggtctc caagtgtgta gaaggcatct ccccaggaaa acggccctgc tgtccacaaa
 840
 ggctccccag aattccctgc ccaagagacc cccaccacat tcccagaaga ggcaccacaca
 900
 gtgtccccag cagtggcaca gagcaacagc agtgaggaag aggccagaga ggctgggtcc
 960
 cctgcacagg agttcaagta tcagaagtcc cttcctcccc gattccagcg ccagcagcag
 1020
 caacaacagc aggagcagct gtaca
 1045

<210> 5198

<211> 283

<212> PRT

<213> Homo sapiens

<400> 5198

Leu	Phe	His	Ser	Phe	Ser	Phe	Phe	Leu	Gly	Pro	Pro	Ala	Val	Val	Gly
1				5					10					15	
Pro	His	Glu	Glu	Val	Asp	Tyr	Ser	Glu	Lys	Leu	Lys	Phe	Ser	Asp	Asp
		20						25					30		
Glu	Glu	Glu	Glu	Glu	Val	Val	Lys	Asp	Gly	Arg	Pro	Lys	Trp	Asn	Ser
		35					40					45			
Trp	Asp	Pro	Arg	Arg	Gln	Arg	Gln	Leu	Ser	Met	Ser	Ser	Ala	Asp	Ser
	50					55				60					
Ala	Asp	Ala	Lys	Arg	Thr	Arg	Glu	Glu	Gly	Lys	Asp	Trp	Ala	Glu	Ala
65					70					75				80	
Val	Gly	Ala	Ser	Arg	Val	Val	Arg	Lys	Ala	Pro	Asp	Pro	Gln	Pro	Pro
			85					90					95		
Pro	Arg	Lys	Leu	His	Gly	Trp	Ala	Pro	Gly	Pro	Asp	Tyr	Gln	Lys	Ser
		100						105					110		
Ser	Met	Gly	Ser	Met	Phe	Arg	Gln	Gln	Ser	Ile	Glu	Asp	Lys	Glu	Asp
	115						120					125			
Lys	Pro	Pro	Pro	Arg	Gln	Lys	Phe	Ile	Gln	Ser	Glu	Met	Ser	Glu	Ala
	130					135					140				
Val	Glu	Arg	Ala	Arg	Lys	Arg	Arg	Glu	Glu	Glu	Glu	Arg	Arg	Ala	Arg
145					150					155				160	
Glu	Glu	Arg	Leu	Ala	Ala	Cys	Ala	Ala	Lys	Leu	Lys	Gln	Leu	Asp	Gln
			165					170					175		
Lys	Cys	Lys	Gln	Ala	Arg	Lys	Ala	Gly	Glu	Ala	Arg	Lys	Gln	Ala	Glu
		180						185					190		
Lys	Glu	Val	Pro	Trp	Ser	Pro	Ser	Ala	Glu	Lys	Ala	Ser	Pro	Gln	Glu
	195					200						205			
Asn	Gly	Pro	Ala	Val	His	Lys	Gly	Ser	Pro	Glu	Phe	Pro	Ala	Gln	Glu
	210					215					220				
Thr	Pro	Thr	Thr	Phe	Pro	Glu	Glu	Ala	Pro	Thr	Val	Ser	Pro	Ala	Val
225					230					235				240	
Ala	Gln	Ser	Asn	Ser	Ser	Glu	Glu	Glu	Ala	Arg	Glu	Ala	Gly	Ser	Pro
			245					250					255		
Ala	Gln	Glu	Phe	Lys	Tyr	Gln	Lys	Ser	Leu	Pro	Pro	Arg	Phe	Gln	Arg

```

65          70          75          80
Tyr Tyr Ile Leu Arg Gln Ser Glu Leu Val Asp Leu Tyr Ile Gln Val
          85          90          95
Ala Gln Asn Val Ala Leu Tyr Thr Gly Asp Pro Asn Leu Gly Leu Glu
          100          105          110
Leu Phe Glu Ala Ala Gly Asp Ile Phe Phe Asp Gly Ala Trp Glu Arg
          115          120          125
Glu Lys Ala Val Ser Phe Tyr Arg Asp Arg Ala Leu Pro Leu Ala Val
          130          135          140
Thr Thr Gly Asn Arg Lys Ala Glu Leu Arg Leu Cys Asn Lys Leu Val
          145          150          155          160
Ala Leu Leu Ala Thr Leu Glu Glu Pro Gln Glu Gly Leu Glu Phe Ala
          165          170          175
His Met Ala Leu Ala Leu Ser Ile Thr Leu Gly Asp Arg Leu Asn Glu
          180          185          190
Arg Val Ala Tyr His Arg Leu Ala Ala Leu Gln His Arg Leu Gly His
          195          200          205
Gly Glu Leu Ala Glu His Phe Tyr Leu Lys Ala Leu Ser Leu Cys Asn
          210          215          220
Ser Pro Leu Glu Phe Asp Glu Glu Thr Leu Tyr Tyr Val Lys Val Tyr
          225          230          235          240
Leu Val Leu Gly Asp Ile Ile Phe Tyr Asp Leu Lys Asp Pro Phe Asp
          245          250          255
Ala Ala Gly Tyr Tyr Gln Leu Ala Leu Ala Ala
          260          265

```

<210> 5197

<211> 1045

<212> DNA

<213> Homo sapiens

<400> 5197

```

natgttggtc aggttggtct caaactcctg acctcgtgat ccgcccacct cagcctcgca
60
aagtgtctggg attacaggcg tgagccacca tgttggtcag tctggtctca nactcctgtc
120
ctcatgatcc gccacactca gcctcgcaaa gtgctgggat tacaggcatg agccaccacg
180
tccggccacc actgactttt tcattctttc tcattcttcc tgggccctcc tgctgttgta
240
ggcccccatg aagaagtga ctattctgag aaactgaagt tcagtgatga tgaagaggag
300
gaagaagttg tgaaggacgg caggccaaag tggaacagtt gggaccctag gaggcagcgg
360
cagttgtcaa tgagctctgc agacagtgcg gacgctaagc ggactcgaga ggaagggaag
420
gactgggctg aagcagtggg tgcgtcccggt gtggtccgaa aggcgccaga cctcagcca
480
ccgcccagga agcttcatgg ctgggcacca ggccctgact accagaagtc atcaatgggc
540
agcatgttcc ggcaacagtc catcgaggac aaggaggaca agccccacc aaggcagaag
600
ttcattcagt cagagatgtc cgaggcgggtg gagcgagccc gaaagcggcg ggaagaagag
660

```


<212> DNA

<213> Homo sapiens

<400> 5195

```

gggccaggc tcacagaggt gtgaaagagg caagcacacc gcaggggcct ctgagcccag
60
ccagcctcgc ttcaatgctg ggaggctgac gtcttccttt ttgtcttctg cccaggccag
120
ctgcgggccc tccagcgggt gtgccacttc tacagcgccg tcatgcccag cgagggcccag
180
tgtgtcatct accatgagct ccagctctcc ctggcctgca aggtggccga caaggtgctg
240
gagggggcag tcctggagac catcagccag ctctacctgt ccctgggcac cgagcggggc
300
tacaaatccg cactggacta caccaaacga agtctgggga ttttcattga cctccagaag
360
aaagagaagg aggcgcatgc ctggctgcaa gcagggaaga tctattacat cttgcggcag
420
agcgagctgg tggacctcta catccagggtg gcacagaacg tggccctgta cacaggcgac
480
cccaacctgg ggctggagct gtttgaggcg gctggagaca tcttcttcga cggggcctgg
540
gagcgggaga aagctgtgtc cttctaccgg gaccgggccc tgcccctggc agtgactacg
600
ggcaaccgca aggcggagct gcggtgtgtc aacaagctgg tggcactgct ggccacgctg
660
gaggagcccc aggagggtt ggagtttgcc cacatggccc tagcactcag catcactctg
720
ggggaccggc tgaacgagcg cgtggcctac caccggctgg ccgccctgca acaccgactg
780
ggccatggcg agctggcaga gcacttctac ctcaaggccc tgtcgctctg caactcgccc
840
ctggagtttg acgaggagac cctctactac gtgaaggtgt acctggtgct cggtgacatc
900
atcttctacg acctgaagga cccgtttgat gcagccgggt actaccagct ggcgctggcg
960
gccg
964

```

<210> 5196

<211> 267

<212> PRT

<213> Homo sapiens

<400> 5196

```

Met Pro Ser Glu Ala Gln Cys Val Ile Tyr His Glu Leu Gln Leu Ser
1           5           10           15
Leu Ala Cys Lys Val Ala Asp Lys Val Leu Glu Gly Gln Leu Leu Glu
20           25           30
Thr Ile Ser Gln Leu Tyr Leu Ser Leu Gly Thr Glu Arg Ala Tyr Lys
35           40           45
Ser Ala Leu Asp Tyr Thr Lys Arg Ser Leu Gly Ile Phe Ile Asp Leu
50           55           60
Gln Lys Lys Glu Lys Glu Ala His Ala Trp Leu Gln Ala Gly Lys Ile

```

340 345 350
 Thr Ser Pro Ala Pro His Arg Pro Pro Lys Arg Gly Pro Leu Val Arg
 355 360 365
 Phe Arg Glu Glu Ala Thr Pro Gln Arg
 370 375

<210> 5193
 <211> 554
 <212> DNA
 <213> Homo sapiens

<400> 5193
 acgcgtccct tcccagaggtt ccaggcggac gtgtcccttc ccgaggttct aggcggacat
 60
 gtcttttgag agggcctcag gttaaccac tactgtgtct gaatctgtcc cttccccaag
 120
 cagcagctct gtgtcccggc atggccactg tggggcagag acacagcagg tcccacatct
 180
 ctgtgccttg cagaccctgc agccctgggg atgctggtct gggacggacc cctagatatc
 240
 acacagccga gaggtaggtc agcgctttaa gatgctgata ccgctggttc agctcctgga
 300
 gcagaattct cagggtggat ttccagcaac gcctcctggg agggtcagca ggggctgggg
 360
 tccgtggggg ggtctccggg aggtttgcct gtgtcaggcc tgtgctgctt ctggcgaggg
 420
 cgcttgcca gcctcatcca gcctggtgct tccggtgcca cgcgctaaca ccttcagtgc
 480
 acgctcggga acgcgcctgg aaggccctgc cctgccccgc cccaggctcc agccagatgc
 540
 tgccagcacc cggg
 554

<210> 5194
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 5194
 Met Leu Ile Pro Leu Val Gln Leu Leu Glu Gln Asn Ser Gln Gly Gly
 1 5 10 15
 Phe Pro Ala Thr Pro Pro Gly Arg Val Ser Arg Gly Trp Gly Pro Trp
 20 25 30
 Gly Gly Leu Arg Glu Val Cys Leu Cys Gln Ala Cys Ala Ala Ser Gly
 35 40 45
 Gly Gly Ala Cys Pro Ala Ser Ser Ser Leu Val Ser Pro Val Pro Arg
 50 55 60
 Ala Asn Thr Phe Ser Ala Arg Ser Gly Thr Arg Leu Glu Gly Pro Ala
 65 70 75 80
 Leu Pro Arg Pro Arg Leu Gln Pro Asp Ala Ala Ser Thr Arg
 85 90

<210> 5195
 <211> 964

ccccctacag cccaccctac ccctcctcca tgggccctgc aggaggggag acccaccttg
 1620
 aagtggggga tc
 1632

<210> 5192
 <211> 377
 <212> PRT
 <213> Homo sapiens

<400> 5192
 Met Ser Val Asn Tyr Ala Ala Gly Leu Ser Pro Tyr Ala Asp Lys Gly
 1 5 10 15
 Lys Cys Gly Leu Pro Glu Ile Phe Asp Pro Pro Glu Glu Leu Glu Arg
 20 25 30
 Lys Val Trp Glu Leu Ala Arg Leu Val Trp Gln Ser Ser Ser Val Val
 35 40 45
 Phe His Thr Gly Ala Gly Ile Ser Thr Ala Ser Gly Ile Pro Asp Phe
 50 55 60
 Arg Gly Pro His Gly Val Trp Thr Met Glu Glu Arg Gly Leu Ala Pro
 65 70 75 80
 Lys Phe Asp Thr Thr Phe Glu Ser Ala Arg Pro Thr Gln Thr His Met
 85 90 95
 Ala Leu Val Gln Leu Glu Arg Val Gly Leu Leu Arg Phe Leu Val Ser
 100 105 110
 Gln Asn Val Asp Gly Leu His Val Arg Ser Gly Phe Pro Arg Asp Lys
 115 120 125
 Leu Ala Glu Leu His Gly Asn Met Phe Val Glu Glu Cys Ala Lys Cys
 130 135 140
 Lys Thr Gln Tyr Val Arg Asp Thr Val Val Gly Thr Met Gly Leu Lys
 145 150 155 160
 Ala Thr Gly Arg Leu Cys Thr Val Ala Lys Ala Arg Gly Leu Arg Ala
 165 170 175
 Cys Arg Gly Gly Cys Glu Ala Pro Glu Asp Ser Pro Gln Leu Pro His
 180 185 190
 Cys Arg Gly Glu Leu Arg Asp Thr Ile Leu Asp Trp Glu Asp Ser Leu
 195 200 205
 Pro Asp Arg Asp Leu Ala Leu Ala Asp Glu Ala Ser Arg Asn Ala Asp
 210 215 220
 Leu Ser Ile Thr Leu Gly Thr Ser Leu Gln Ile Arg Pro Ser Gly Asn
 225 230 235 240
 Leu Pro Leu Ala Thr Lys Arg Arg Gly Gly Arg Leu Val Ile Val Asn
 245 250 255
 Leu Gln Pro Thr Lys His Asp Arg His Ala Asp Leu Arg Ile His Gly
 260 265 270
 Tyr Val Asp Glu Val Met Thr Arg Leu Met Lys His Leu Gly Leu Glu
 275 280 285
 Ile Pro Ala Trp Asp Gly Pro Arg Val Leu Glu Arg Ala Leu Pro Pro
 290 295 300
 Leu Pro Arg Pro Pro Thr Pro Lys Leu Glu Pro Lys Glu Glu Ser Pro
 305 310 315 320
 Thr Arg Ile Asn Gly Ser Ile Pro Ala Gly Pro Lys Gln Glu Pro Cys
 325 330 335
 Ala Gln His Asn Gly Ser Glu Pro Ala Ser Pro Lys Arg Glu Arg Pro

<400> 5191
tcccgcattt tagaggtgac tggagaactc tcacgtaggc ggccgccccca atttcccgc
60
cgggtcatcg gggagcccct tcccaagccc cgcaaacacc tgcattgaaa gaggcaggct
120
tccttctgac agcagataac atgtcgccctg cggcgtcagc aagaggcgca tgcgccttgc
180
cgtgggaggc cgggtgcgca ggactggaac gcggttcctc cttcttcccc gccccgcccc
240
gcttccggcg gaagcggcct caacaaggga aactttattg ttcccgtagg gcagtcgagg
300
atgtcggga attacgcggc ggggctgtcg ccgtacgcgg acaagggcaa gtgcggcctc
360
ccggagatct tcgaccccc ggaggagctg gagcggaagg tgtgggaact ggcgaggctg
420
gtctggcagt cttcagtggt ggtgttcac acgggtgccc gcattcagcac tgcctctggc
480
atccccgact tcaggggtcc ccacggagtc tggaccatgg aggagcgagg tctggcccc
540
aagttcgaca ccacctttga gagcgcgcg cccacgcaga cccacatggc gctggtgcag
600
ctggagcgcg tgggcctcct ccgcttctg gtcagccaga acgtggacgg gctccatgtg
660
cgctcaggct tccccagga caaactggca gagctccacg ggaacatgtt tgtggaagaa
720
tgtgccaagt gtaagacgca gtacgtccga gacacagtcg tgggcacat gggcctgaag
780
gccacgggcc ggctctgcac cgtggctaag gcaagggggc tgcgagcctg caggggaggc
840
tgcgagggcc ctgaggactc tcctcagctt cctcattgca ggggagagct gagggacacc
900
atcctagact gggaggactc cctgcccgac cgggacctgg cactcgccga tgaggccagc
960
aggaacgcg acctgtccat cacgctgggt acatcgctgc agatccggcc cagcgggaac
1020
ctgccgctgg ctaccaagcg ccggggaggc cgcttggtca tcgtcaacct gcagcccacc
1080
aagcacgacc gccatgctga cctccgcac catggctacg ttgacgaggt catgaccgg
1140
ctcatgaagc acctggggct ggagatcccc gcctgggacg gccccctgtg gctggagagg
1200
gcgctgccac ccctgcccc cccgcccacc cccaagctgg agcccaagga ggaatctccc
1260
accggatca acggtcttat cccgcgggc cccaagcagg agccctgccc ccagcacaac
1320
ggctcagagc ccgccagccc caaacgggag cggccacca gccctgcccc ccacagaccc
1380
cccaaaaggg ggcctctggt gcggttcgg gaagaagcca cccccagag gtgacagctg
1440
agcccctgcc acacccagc ctctgacttg ctgtgtgtc cagaggtgag gctgggccc
1500
ccctggtctc cagcttaaac aggagtgaac tcctctgtc cccagggcct ccctctggtg
1560

420 425 430
 Gln Met Lys Met Glu Leu Ser Arg Val Arg Arg His Thr Lys Ala Ser
 435 440 445
 Ser Glu Gly Lys Asp Ser Val Val Leu Gln Asn Ile Leu Arg Tyr Ile
 450 455 460
 Val Leu Ser Gln Leu Phe Cys Ser Arg Leu Val Pro Pro Leu Val Cys
 465 470 475 480
 Leu Phe Gly Asn Tyr Arg Pro His Leu
 485

<210> 5189
 <211> 323
 <212> DNA
 <213> Homo sapiens

<400> 5189
 acgcgtgaag ggattacagg catgagccac tgcacctggc caggagaaat tgtttttata
 60
 acgtatgaca aatgcttgag taattcctgg cttgaaagtg ggctcacaat aaataactgg
 120
 aatccaaaaa taacaaaatg tttagcaatt caggtaatgt caagcagtat tcaaacacat
 180
 gaagttaatc attccttaat tctgttttat ttatatttca tttttgcttt ctttttactc
 240
 catgtgttat tcttacagaa gtcacaagtt aaatgttttt ggggaacttt gggggggggg
 300
 gacaaacatc catgtgctgc taa
 323

<210> 5190
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5190
 Met Ser His Cys Thr Trp Pro Gly Glu Ile Val Phe Ile Thr Tyr Asp
 1 5 10 15
 Lys Cys Leu Ser Asn Ser Trp Leu Glu Ser Gly Leu Thr Ile Asn Asn
 20 25 30
 Trp Asn Pro Lys Ile Thr Lys Cys Leu Ala Ile Gln Val Met Ser Ser
 35 40 45
 Ser Ile Gln Thr His Glu Val Asn His Ser Leu Ile Pro Val Tyr Leu
 50 55 60
 Tyr Phe Ile Phe Ala Phe Phe Leu Leu His Val Leu Phe Leu Gln Lys
 65 70 75 80
 Ser Gln Val Lys Cys Phe Trp Gly Thr Leu Gly Gly Gly Asp Lys His
 85 90 95
 Pro Cys Ala Ala
 100

<210> 5191
 <211> 1632
 <212> DNA
 <213> Homo sapiens

<400> 5188

```

Met Ile Ser Ala Ala Gln Leu Leu Asp Glu Leu Met Gly Arg Asp Arg
 1           5           10           15
Asn Leu Ala Pro Asp Glu Lys Arg Ser Asn Val Arg Trp Asp His Glu
      20           25           30
Ser Val Cys Lys Tyr Tyr Leu Cys Gly Phe Cys Pro Ala Glu Leu Phe
      35           40           45
Thr Asn Thr Arg Ser Asp Leu Gly Pro Cys Glu Lys Ile His Asp Glu
      50           55           60
Asn Leu Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly
65           70           75           80
Tyr Glu Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val
      85           90           95
Glu Arg Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn
      100          105          110
Gln Gln Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Glu Glu Lys
      115          120          125
Ile Gln Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu
      130          135          140
Glu Leu Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys
      145          150          155          160
Leu Val Glu Gln Leu Lys Glu Glu Arg Glu Leu Leu Arg Ser Thr Thr
      165          170          175
Ser Thr Ile Glu Ser Phe Ala Ala Gln Glu Lys Gln Met Glu Val Cys
      180          185          190
Glu Val Cys Gly Ala Phe Leu Ile Val Gly Asp Ala Gln Ser Arg Val
      195          200          205
Asp Asp His Leu Met Gly Lys Gln His Met Gly Tyr Ala Lys Ile Lys
      210          215          220
Ala Thr Val Glu Glu Leu Lys Glu Lys Leu Arg Lys Arg Thr Glu Glu
      225          230          235          240
Pro Asp Arg Asp Glu Arg Leu Lys Lys Glu Lys Gln Glu Arg Glu Glu
      245          250          255
Arg Glu Lys Glu Arg Glu Arg Glu Arg Glu Glu Arg Glu Arg Lys Arg
      260          265          270
Arg Arg Glu Glu Glu Glu Arg Glu Lys Glu Arg Ala Arg Asp Arg Glu
      275          280          285
Arg Arg Lys Arg Ser Arg Ser Arg Ser Arg His Ser Ser Arg Thr Ser
      290          295          300
Asp Arg Arg Cys Ser Arg Ser Arg Asp His Lys Arg Ser Arg Ser Arg
      305          310          315          320
Glu Arg Arg Arg Ser Arg Ser Arg Asp Arg Arg Arg Ser Arg Ser His
      325          330          335
Asp Arg Ser Glu Arg Lys His Arg Ser Arg Ser Arg Asp Arg Arg Arg
      340          345          350
Ser Lys Ser Arg Asp Arg Lys Ser Tyr Lys His Arg Ser Lys Ser Arg
      355          360          365
Asp Arg Glu Gln Asp Arg Lys Ser Lys Glu Lys Glu Lys Arg Gly Ser
      370          375          380
Asp Asp Lys Lys Ser Ser Val Lys Ser Gly Ser Arg Glu Lys Gln Ser
      385          390          395          400
Glu Asp Thr Asn Thr Glu Ser Lys Glu Ser Asp Thr Lys Asn Glu Val
      405          410          415
Asn Gly Thr Ser Glu Asp Ile Lys Ser Glu Val Gln Arg Lys Tyr Ala

```

gggccgtgtg aaaaaattca tgatgaaaat ctacgaaaac agtatgagaa gagctctcgt
360
ttcatgaaag ttggctatga gagagatttt ttgcgatact tacagagctt acttgcagaa
420
gtagaacgta ggatcagacg aggccatgct cgtttggcat tatctcaaaa ccagcagtct
480
tctggggccg ctggcccaac aggcaaaaat gaagaaaaaa ttcagggttct aacagacaaa
540
attgatgtac ttctgcaaca gattgaagaa ttaggggtctg aaggaaaagt agaagaagcc
600
caggggatga tgaaattagt tgagcaatta aaagaagaga gagaactgct aaggccaca
660
acgtcgacaa ttgaaagctt tgctgcacaa gaaaaacaaa tggaagtttg tgaagtatgt
720
ggagcctttt taatagtagg agatgcccg tcccgggtag atgaccattt gatgggaaaa
780
caacacatgg gctatgcaa aattaaagct actgtagaag aattaaaga aaagttaagg
840
aaaagaaccg aagaacctga tcgtgatgag cgtctaaaaa aggagaagca agaaagagaa
900
gaaagagaaa aagaacggga gagagaaagg gaagaaagag aaaggaaaag acgaagggaa
960
gaggaagaaa gagaaaaaga aagggtctcg gacagagaaa gaagaaagag aagtcgttca
1020
cgaagtagac actcaagccg aacatcagac agaagatgca gcagggtctg ggaccacaaa
1080
aggtcacgaa gtagagaaag aaggcggagc agaagtagag atcgacgaag aagcagaagc
1140
catgatcgat cagaaagaaa acacagatct cgaagtcggg atcgaagaag atcaaaaagc
1200
cgggatcgaa agtcatataa gcacaggagc aaaagtcggg acagagaaca agatagaaaa
1260
tccaaggaga aagaaaagag gggatctgat gataaaaaaa gtagtgtgaa gtccggtagt
1320
cgagaaaagc agagtgaaga cacaacact gaatcgaagg aaagtgtac taagaatgag
1380
gtcaatggga ccagtgaaga cattaaatct gaagtgcagc gtaagtatgc acagatgaag
1440
atggaactaa gccgagtaag aagacatata aaagcctctt ctgaaggaaa agacagtgt
1500
gtcctgcaaa acattttgag gtacattgtt ttgtctcagc tattttgtag cagactcgtg
1560
ccccattag tgtgcctctt tggaaattat cggccacatt tgtaatatag tcgccattga
1620
aaagttaatt atcctttttt tagggatttt gatgtcgttt cttttttttt ttaatacaaa
1680
ggttgaactg tttttttttt ctttttttgg tt
1712

<210> 5188

<211> 489

<212> PRT

<213> Homo sapiens

<211> 243

<212> PRT

<213> Homo sapiens

<400> 5186

```

Met Arg Asn Ser Leu Asp Leu Val Pro Leu Arg His Met Ser Val Gln
 1           5           10           15
Thr Gly Asp Tyr Lys Ser Leu Lys Ile Leu Gly Leu Leu Glu Ile Ser
 20           25           30
Leu Ala Ile Tyr Ser Ser Leu Val Ser Gln Ile Ser Leu Cys His Pro
 35           40           45
Gly Trp Ser Thr Val Val Arg Ser Gln Leu Thr Ala Thr Ser Ala Ser
 50           55           60
Arg Phe Lys Arg Phe Ala Cys Leu Cys Leu Ser Tyr Val Pro Phe Arg
 65           70           75           80
Lys Ile Leu Leu Gln Glu Lys Ile Trp Phe Gln Asp Val Ser Trp Thr
 85           90           95
Gly Gly His Val Pro Arg Val Pro Arg Thr Gly Trp Val Tyr Arg Asn
100           105           110
Val Gln Arg Pro Glu Ser Val Ser Asp His Met Tyr Arg Met Ala Val
115           120           125
Met Ala Met Val Ile Lys Asp Asp Arg Leu Asn Lys Asp Xaa Glu Ala
130           135           140
Met Lys Gln Ile Thr Gln Leu Leu Pro Glu Asp Leu Arg Lys Glu Leu
145           150           155           160
Tyr Glu Leu Trp Glu Glu Tyr Glu Thr Gln Ser Ser Ala Glu Ala Lys
165           170           175
Phe Val Lys Gln Leu Asp Gln Cys Glu Met Ile Leu Gln Ala Ser Glu
180           185           190
Tyr Glu Asp Leu Glu His Lys Pro Gly Arg Leu Gln Asp Phe Tyr Asp
195           200           205
Ser Thr Ala Gly Lys Phe Asn His Pro Glu Ile Val Gln Leu Val Ser
210           215           220
Glu Leu Glu Ala Glu Arg Ser Thr Asn Ile Ala Ala Ala Ala Ser Glu
225           230           235           240
Pro His Ser

```

<210> 5187

<211> 1712

<212> DNA

<213> Homo sapiens

<400> 5187

```

nttttgtctt gtcggctcct gtgtgtagga gggatttcgg cctgagagcg ggccgaggag
60
attggcgacg gtgtcgcccc tgttttcggt ggcgggtgcc tgggctggtg ggaacagccg
120
cccgaaggaa gcaccatgat ttcggccgcg cagttgttgg atgagttaat gggccggggc
180
cgaaacctag ccccgacga gaagcgcagc aacgtgcggt gggaccacga gagcgtttgt
240
aaatattatc tctgtggttt ttgtcctgcg gaattgttca caaatacacg ttctgatctt
300

```


cggattccca tgagaaactc tctggatcta gttcctctac gtcacatgag tgtgcaaaca
180
ggagactaca agagtttaaa aatactggga ctgctggaga tttccctggc catatatagt
240
tcacttgttt cacagatctc actctgtcac ccaggctgga gtacagtggg gcgatctcaa
300
cttactgcaa cctccgcctc ccggttcaag cgattcgcct gcctctgcct tagctatgtc
360
cctttcagaa aaattctact tcaagagaag atttggtttc aggatgtctc ctggactgga
420
gggcatgtac ctagagtccc acgaactggc tgggtataca gaaatgtcca gaggccggag
480
agcgtttcag atcacatgta ccggatggca gttatggcta tggatgacaa agatgaccgt
540
cttaacaaag acncggaagc tatgaagcag ataaccagc tcctaccaga ggacctcaga
600
aaggagctct atgaactttg ggaagagtac gagacccaat ctagtgcaga agccaaattt
660
gtgaagcagc tagaccaatg tgaaatgatt cttcaagcat ctgaatatga agaccttgaa
720
caciaaacctg ggagactgca agacttctat gattccacag caggaaaatt caatcacctc
780
gagatagtcc agcttggttc tgaacttgag gcagaaagaa gcactaacat agctgcagct
840
gccagtgagc cacactcctg agacactctc taaattgctg cactcctgta acaaacatta
900
ttttccatt tcattgtatt gtgttttgcc attgttggtc tgttgatttc cctagatgtg
960
agtctgtttg ttttcaattg tctgaacttc agcaagaaat gtgatacaac ttgggcacta
1020
aaagaagcca cagaacagga agcgggtcatg aaagtgccat ggatgaacac tggaggtggc
1080
agtgcctgtt tatgaactaa ataaataaat attaaacacc taaaatatta gaatatttat
1140
tggagattta aaatcatctt attctgactt aattaccgat atccccgaag gctaggttca
1200
ttgaataata gaaaatttca ttatgattgc ttttaagaac agattcttca gctgatttag
1260
tgataagaat ccagaaaaga aaatgtacta gtgatgtatt ctctcccag atgaaattgc
1320
tgccttattc agatttactc tcttgagcca gattttgaat ttcactgcag actgcttcag
1380
acttctaate ataggcttgt aaacctacta ataggctctg cccctcttcc caatactttt
1440
tgtcatttag agatataaac cggggcatat aaaaatgcaa cttgtattcc tttgtatatt
1500
tttccctgtc tgacttataa atcttgagac ctttattgta aaagcattta tcatcagggtg
1560
agaaatataa ataggaactg gggtcattga gcctcaggta gggaatatat caaccggatt
1620
tcttctctc ttttcccttt tataggataa ataatcc
1657

<210> 5186

50 55 60
 Asn Asn Asp Leu Gly Pro Asn Trp Arg Asp Lys Leu Glu Tyr Phe Glu
 65 70 75 80
 Glu Arg Pro Phe Ala Ala Ala Ser Ile Gly Gln Val His Leu Ala Arg
 85 90 95
 Met Lys Gly Gly Arg Glu Val Ala Met Lys Ile Gln Tyr Pro Gly Val
 100 105 110
 Ala Gln Ser Ile Asn Ser Asp Val Asn Asn Leu Met Ala Val Leu Asn
 115 120 125
 Met Ser Asn Met Leu Pro Glu Gly Leu Phe Pro Glu His Leu Ile Asp
 130 135 140
 Val Leu Arg Arg Glu Leu Ala Leu Glu Cys Asp Tyr Gln Arg Glu Ala
 145 150 155 160
 Ala Cys Ala Arg Lys Phe Arg Asp Leu Leu Lys Gly His Pro Phe Phe
 165 170 175
 Tyr Val Pro Glu Ile Val Asp Glu Leu Cys Ser Pro His Val Leu Thr
 180 185 190
 Thr Glu Leu Val Ser Gly Phe Pro Leu Asp Gln Ala Glu Gly Leu Ser
 195 200 205
 Gln Glu Ile Arg Asn Glu Ile Cys Tyr Asn Ile Leu Val Leu Cys Leu
 210 215 220
 Arg Glu Leu Phe Glu Phe His Phe Met Gln Thr Asp Pro Asn Trp Ser
 225 230 235 240
 Asn Phe Phe Tyr Asp Pro Gln Gln His Lys Val Ala Leu Leu Asp Phe
 245 250 255
 Gly Ala Thr Arg Glu Tyr Asp Arg Ser Phe Thr Asp Leu Tyr Ile Gln
 260 265 270
 Ile Ile Arg Ala Ala Ala Asp Arg Asp Arg Glu Thr Val Arg Ala Lys
 275 280 285
 Ser Ile Glu Met Lys Phe Leu Thr Gly Tyr Glu Val Lys Val Met Glu
 290 295 300
 Asp Ala His Leu Asp Ala Ile Leu Ile Leu Gly Glu Ala Phe Ala Ser
 305 310 315 320
 Asp Glu Pro Phe Asp Phe Gly Thr Gln Ser Thr Thr Glu Lys Ile His
 325 330 335
 Asn Leu Ile Pro Val Met Leu Arg His Arg Leu Val Pro Pro Pro Glu
 340 345 350
 Glu Thr Tyr Ser Leu His Arg Lys Met Gly Gly Ser Phe Leu Ile Cys
 355 360 365
 Ser Lys Leu Lys Ala Arg Phe Pro Cys Lys Ala Met Phe Glu Glu Ala
 370 375 380
 Tyr Ser Asn Tyr Cys Lys Arg Gln Ala Gln Gln
 385 390 395

<210> 5185

<211> 1657

<212> DNA

<213> Homo sapiens

<400> 5185

gtgcactcac agaattctgct gcttcccagg tcttttggat gtgaaatgaa accccaagga

60

ctgctttaac aaggggcaaa aacacatgca accaaagcca gcagttatgc cgaagcatcc

120

gcctacagca actactgcaa gaggcaggcc cagcagtagg gctgcggggc acgcccaggc
 1380
 cggctccgcg ggaactctct ccctcagaca ggccaaaaac cagtagcgag gtcgtgggtga
 1440
 tgctcttttt aactcctttg cccaataagg ggggtggctg cctggagccc cgtagccagc
 1500
 gctttccacg gtttctgttg ctaaatgggt gtaggggtgag aagtgaaga atgaagatga
 1560
 agccccactg ctcggtcagt ctgcctccgt gtgtcctctg aaataagcag atgaagatga
 1620
 aagggcaact ttgttttctt ctttttcctg atgtgaatgt taagcagaag ggagagagtc
 1680
 cttactccct tccaatctct gttcagtgc aaaccagaa acatgaacag atacgattgt
 1740
 gggattttta tcactctgtg agtaggtgtg tgtatgtgtt tctagagtga gatttgtgtt
 1800
 ttctgccctt ttctctcca gccgatgggc tggagctggg agaggtgctg agctaacagt
 1860
 gccacaagt gctccttaag cctgcgaggc ccaggcctgt ggggctgggt ctcacctttg
 1920
 acagctgaat gttcctaaag aactgctgcc ccacagtgc ggtgggagca gcggaacagg
 1980
 gaatgccaga cacaggctcg ctgctgctgg aaggcggggg gggacttcct tcctctgtcc
 2040
 ggagaggcac aggtgtcacc agttccagcc aaaggctcct cacaggcgct gtgaattttt
 2100
 gtacaagtct tgtaattatc gaatcaacaa cttgtttcaa ttttaataaaa atgctcatgg
 2160
 gaaggcgggc gcggaggcgg ctagaagggt accgcggatc ccagcttcct gcagtcagcc
 2220
 ctgaaggatg gctgccatat tgggagacac catcatggtg gctaaaggcc ttgtcaagct
 2280
 gacccctgcg ctccgaggac ccctcaggga agaaggcctg gctgggttcc agtcctttcc
 2340
 tgtccgaggc caatgcagag cggatcgtgc gcacgctctg caagggtcgt ggtgcggcac
 2400
 tcaagctggg ccagatgctg agcatccagg atgatgcctt tatcaacccc cacctggcta
 2460
 agatct
 2466

<210> 5184

<211> 395

<212> PRT

<213> Homo sapiens

<400> 5184

Pro	Phe	Leu	Ser	Glu	Ala	Asn	Ala	Glu	Arg	Ile	Val	Arg	Thr	Leu	Cys
1				5				10						15	
Lys	Val	Arg	Gly	Ala	Ala	Leu	Lys	Leu	Gly	Gln	Met	Leu	Ser	Ile	Gln
			20					25						30	
Asp	Asp	Ala	Phe	Ile	Asn	Pro	His	Leu	Ala	Lys	Ile	Phe	Glu	Arg	Val
		35					40					45			
Arg	Gln	Ser	Ala	Asp	Phe	Met	Pro	Leu	Lys	Gln	Met	Met	Lys	Thr	Leu

675
 Ile Glu Glu Leu Tyr Ser Ile Ser Met
 690 680 685
 695

<210> 5183
 <211> 2466
 <212> DNA
 <213> Homo sapiens

<400> 5183
 nngtgcacgt gccaatgga tgcggcggcg aagggccgct cctcgaagta ttccaacttg
 60
 tcccgccagt tggggcccag gtcgttggtg agagttttca tcatctgctt cagtggcatg
 120
 agcctgcgct ccgaggaccc ctcagggaag aaggccgtgc tgggttcag tcttttcctg
 180
 tccgaggcca atgcagagcg gatcgtgcgc acgctctgca aggtgcgtgg tgcggcactc
 240
 aagctgggccc agatgctgag catccaggat gatgccttta tcaacccccca cctggctaag
 300
 atcttcgagc ggggtgcggca gagcgcggac ttcatgccac tgaagcagat gatgaaaact
 360
 ctcaacaacg acctgggccc caactggcgg gacaagttgg aatacttcga ggagcggccc
 420
 ttcgccgccc catccattgg gcaggtgcac ttggcccga tgaagggcgg ccgcgaggtg
 480
 gccatgaaga tccagtaccc tggcgtggcc cagagcatca acagtgatgt caacaacctc
 540
 atggccgtgt tgaacatgag caacatgctt ccagaaggcc tgttccccga gcacctgac
 600
 gacgtgctga ggccgggagct ggccctggag tgtgactacc agcgagaggc cgctgtgccc
 660
 cgcaagttca gggacctgct gaagggccac ccttcttct atgtgcctga gattgtggat
 720
 gagctctgca gcccacatgt gctgaccaca gagctggtgt ctggcttccc cctggaccag
 780
 gccgaagggc tcagccagga gattcggaac gagatctgct acaacatcct ggttctgtgc
 840
 ctgagggagc tgtttgagtt ccacttcattg caaacagacc ccaactggtc caacttcttc
 900
 tatgaccccc agcagcaciaa ggtggctctt ttggattttg gggcaacgcg ggaatatgac
 960
 agatccttca ccgacctcta cattcagatc atcagggtcg ctgccgacag ggacagggag
 1020
 actgtgcggg cgaaatccat agagatgaag ttcctcaccg gctacgaggt caaggctcatg
 1080
 gaagacgccc acttggtatgc catcctcatc ctggggggagg ccttcgcctc cgatgagcct
 1140
 tttgattttg gcactcagag caccaccgag aagatccaca acctgattcc cgtcatgctg
 1200
 aggcaccgtc tcgtcccccc acccgaggaa acctactccc tgcacaggaa gatggggggc
 1260
 tcttctctca tctgctccaa gctgaaggcc cgcttccctt gcaaggccat gtctgaggag
 1320

4362

aaaaagaatc tgtttcccat tgtcctccta ctcaactaaa attcatagtt ggctttaagc
 4560
 ccaaagaat tttgaacaat gtgacagaaa caagtaatgt aaaacttatt ttgttttatt
 4620
 tatactttat aatagttaga tataacagat tatggacaac ttaatatattc ttctttttgg
 4680
 ctgggcgcggtg tggctcatgc ctgtggtccc ggcactttgg gaggccgagg cgggcagatc
 4740
 acgaggtcag gagatcgaga ccacctggc taacacagtg aaaccccgtc tctactaaaa
 4800
 gaatacaaaa aattagccgg gcgttggtggc gggcgccgtg agtcccagct actcgggagg
 4860
 ctgaggcagg ggaatggcat gagcctggga ggcggagctt gcagtgagcc gagatccgc
 4920
 cactgtactc cagcctgggc aacagaacga gactccgtct c
 4961

<210> 5182

<211> 697

<212> PRT

<213> Homo sapiens

<400> 5182

Met	Gln	Thr	Gln	Glu	Ile	Leu	Arg	Ile	Leu	Arg	Leu	Pro	Glu	Leu	Gly
1				5					10					15	
Asp	Leu	Gly	Gln	Phe	Phe	Arg	Ser	Leu	Ser	Ala	Thr	Thr	Leu	Val	Ser
			20				25						30		
Met	Gly	Ala	Leu	Ala	Ala	Ile	Leu	Ala	Tyr	Trp	Phe	Thr	His	Arg	Pro
		35					40					45			
Lys	Ala	Leu	Gln	Pro	Pro	Cys	Asn	Leu	Leu	Met	Gln	Ser	Glu	Glu	Val
		50				55					60				
Glu	Asp	Ser	Gly	Gly	Ala	Arg	Arg	Ser	Val	Ile	Gly	Ser	Gly	Pro	Gln
65					70					75				80	
Leu	Leu	Thr	His	Tyr	Tyr	Asp	Asp	Ala	Arg	Thr	Met	Tyr	Gln	Val	Phe
			85						90					95	
Arg	Arg	Gly	Leu	Ser	Ile	Ser	Gly	Asn	Gly	Pro	Cys	Leu	Gly	Phe	Arg
			100					105					110		
Lys	Pro	Lys	Gln	Pro	Tyr	Gln	Trp	Leu	Ser	Tyr	Gln	Glu	Val	Ala	Asp
		115					120					125			
Arg	Ala	Glu	Phe	Leu	Gly	Ser	Gly	Leu	Leu	Gln	His	Asn	Cys	Lys	Ala
		130				135					140				
Cys	Thr	Asp	Gln	Phe	Ile	Gly	Val	Phe	Ala	Gln	Asn	Arg	Pro	Glu	Trp
145				150					155					160	
Ile	Ile	Val	Glu	Leu	Ala	Cys	Tyr	Thr	Tyr	Ser	Met	Val	Val	Val	Pro
			165						170					175	
Leu	Tyr	Asp	Thr	Leu	Gly	Pro	Gly	Ala	Ile	Arg	Tyr	Ile	Ile	Asn	Thr
		180						185					190		
Ala	Asp	Ile	Ser	Thr	Val	Ile	Val	Asp	Lys	Pro	Gln	Lys	Ala	Val	Leu
		195					200					205			
Leu	Leu	Glu	His	Val	Glu	Arg	Lys	Glu	Thr	Pro	Gly	Leu	Lys	Leu	Ile
		210				215					220				
Ile	Leu	Met	Asp	Pro	Phe	Glu	Glu	Ala	Leu	Lys	Glu	Arg	Gly	Gln	Lys
225					230					235				240	
Cys	Gly	Val	Val	Ile	Lys	Ser	Met	Gln	Ala	Val	Glu	Asp	Cys	Gly	Gln

tatgtgaaaa ttttctctct gatttttact ttcattcatg aaaaatgaaa attcagaaat
2940
tctttttttc ctttttggtt tgagacgggg tctgctctgt cacctaggct ggagtgcagt
3000
ggcttaatca tggctcattg cagtctccat ctcttgggct cgagtgatcc tctgtctca
3060
cctcccagat agctgagact acagtacagg cgcattgccac cacacctggc taatagaaat
3120
ttttttttta gagattttgc tcaggctggt ctcaaactcc tgagctcaag ggatcctccc
3180
gccttggcct ccctagggtg tgggattgca ggcattgagcc attgttccca gccaaattca
3240
gatattatta aaacacatgt catatttata tagtaactta caaagacctt tcaatacatt
3300
ttctcattta ttaagctcat taaagtattc aggaactacc tagaaaaaat ataatgtaaa
3360
actattcaag gatagtgtgt gtatgttcat ggacttctta ttataatgaa ttctaaaaga
3420
catctgttga ctctacaatg aatggatcct tgaggaatac ttgggagaag aaactcagag
3480
ttattttctca ggataggcag caattaatgt acctacattc cttgctgggg tcttctagtc
3540
ttccattccc aatgtgccc a tgcattgcct ggaaacccta tatggttgta attctgaaca
3600
atttcacttt ttttccagta agaatatcaa ggcagaagggt gggaaggagg ggacattatt
3660
tccagggaaa atagtttttc aacaatataa ctttgataaa cctcttttaa atgccccaa
3720
aaaacttttt aagtccatag acaaagaaat actgccta at ggcataatta cattcctaaa
3780
atctttaagc gtgccgaagt ttaaccacta aaacctcctt tcttgcatca tgtatttaga
3840
tgcacctgt attgggggtgt caacaatttc ttataattaa aggccagata ccatggacag
3900
caattaagtt ccaagctata gattgtgcct ctgaaaaagg catggacccc aggaacgtgt
3960
ttttctcttg tagagacaag actctaaaag catatcaaca atccatagc aattcatgtg
4020
ttaattttaa atgtatgtgc tcagtgtttg tagtctagaa gctcctttcc cttggaggaa
4080
tgccaagcag tttgcaaaaa taaatgctgt tagttaaaaa ccacataatc acatgggcct
4140
actgaataaa tatgcatcag tgattatata cttatatttc agtcttgtca aaagtgaatc
4200
actgtttcat ttgatgtatt taccagctct ttttatccag tttttcttgg gcatattctc
4260
tctgaagacc cactgttgca cttctaaatt tgacagttaa gaaatgagct agttctatac
4320
acactgattt ttaaaggcgt ttctgaataa actaatactt aaaatgtcca aagtcacatc
4380
tgtacagcat tagattttta tatttaatat atatttgact aattaaaagt gaaagttgtt
4440
acctgaactg gatattcata ctattttaag ggcaagttgc ttacatttca ataacaacaa
4500

ggcttcttcc agggagatat ccgccttctc tcagatgaca tgaaggctct atgccccacc
1320
atcttccctg tgggtccacg actgctgaac cggatgtacg acaagatctt cagccaggca
1380
aacacaccat taaagcgctg gctcctggag tttgcagcaa agcgtaagca agccgaggtc
1440
cggagtggaa tcatacaggaa tgatagtatc tgggatgaac tcttctttaa taagattcag
1500
gccagtcttg gtgggtgtgt gcggatgatt gttactggag cagccccagc atcaccaaca
1560
gttctgggat ttctccgggc agctctaggg tgccagggtt atgaaggtta tggccaaact
1620
gagtgacacg ctggatgtac cttcaccact cctggcgact ggacctcagg gcacgtaggg
1680
gcgccacttc cctgcaatca tatcaagctc gttgatgttg aggaactgaa ctactgggccc
1740
tgcaaaggag agggagagat atgtgtgaga ggaccaaagtg tgttcaaagg ctacttgaaa
1800
gatccagaca ggacgaagga ggccctggac agcgatggct ggcttcacac tggagacatc
1860
ggaaaatggc tgccggcagg aactcttaaa attattgacg ggaaaaagca tatatttaaa
1920
cttgctcagg gagaatatgt tgcacccgag aagattgaga acatctacat ccggagccaa
1980
cctgtggcgc aaatctatgt ccattggggac agcttaaagg cctttttggt aggcattgtt
2040
gtgcctgacc ctgaagttat gccctcctgg gcccagaaga gaggaattga aggaacatat
2100
gcagatctct gcacaaataa ggatctgaag aaagccattt tggaagatat ggtgaggtta
2160
ggaaaagaaa gtggactcca ttcttttgag caggttaaag ccattcacat ccattctgac
2220
atgttctcag ttcaaaatgg cttgctgaca ccaacactaa aagctaagag acctgagctg
2280
agagagtact tcaaaaaaca aatagaagag ctttactcaa tctccatgtg aagttcaagg
2340
aaagttcttc tcagtgtaat gaactgtcta gcaatattat agttattctt gaaagtaatg
2400
agtcaaaatg acacagctga aaatgaataa gcattctgatt ttatgactga gccttttctt
2460
gtcccaagag gtctttaaca atattttctc tatcatcaat gagtatatat tatttttatt
2520
ataaaaaatga tattgtgggtg gactgctaaa aatatcacia atggcaatgt aaaaatcaag
2580
acattttctc aagaactgtg taccactaaa agtaatatat tgtcaatgtt cacagaacta
2640
ttaaacataa aggaaaaaca taagtgatat attctactta attatttggt aatcagtaac
2700
cagatgcagc aaatatctag gcaatgtgga ctacctcatt cagtaactga ttgtcaaaat
2760
cacaattaaa tcagacttca aaaattaaag ctaggtgtat agaatacatg taaaagaaaa
2820
catgataact catagtctac gtaacttcag agtcttttaa catgacaatc cacattgtca
2880

	405		410		415										
Ile	Pro	Val	Phe	Gln	Arg	Gly	Gly	Ser	Val	Ile	Pro	Ile	Lys	Thr	Thr
	420						425						430		
Val	Gly	Lys	Ser	Thr	Gly	Trp	Met	Thr	Glu	Ser	Ser				
	435						440								

<210> 5181
 <211> 4961
 <212> DNA
 <213> Homo sapiens

<400> 5181
 acgcgtgcag gtggcagagc acccaggcct tgaggtccag gaagcatcat tcccagagct
 60
 gccagagcag tggccctgga aaatatggaa gcagctgtca gccatggccc agggcctgag
 120
 cgtatgattc tcaggaaaag tgggcaggat atctgactgt caggtgtgcc ggcagaaggt
 180
 tctggcctct tcttgggaaa agccctttta gagtttgccc tctcacttct ggagaagatg
 240
 cagacacagg agatcctgag gatactgcga ctgcctgagc taggtgactt gggacagttt
 300
 ttccgcagcc tctcgccac caccctcgtg agtatgggtg ccctggctgc catccttgcc
 360
 tactggttca ctcaccggcc aaaggccttg caaccacat gcaacctcct gatgcagtcg
 420
 gaagaagtag aggacagtgg cggggcacgg cgatctgtga ttgggtcttg ccctcaattg
 480
 cttaccatt actatgatga tgcccgacc atgtaccagg tgttccgccc tgggcttagc
 540
 atctcagga atgggccctg tcttggttcc aggaagccta agcagcctta ccagtggctg
 600
 tcctaccagg aggtggccga cagggtgaa tttctggggt cggacttct ccagcacaat
 660
 tgtaaagcat gcactgatca gtttattggt gttttgcac aaaatcggcc agagtggatc
 720
 attgtggagc tggcctgcta cacatatcc atggtggtgg tcccgtctta tgacacctg
 780
 ggccctgggg ctatccgcta catcatcaat acagcggaca tcagcacctg gattgtggac
 840
 aaacctcaga aggtgtgct tctgctagag catgtggaga ggaaggagac tccaggcctc
 900
 aagctgatca tcctcatgga ccattcgaa gaagccctga aagagagagg gcagaagtgc
 960
 ggggtggtca ttaagtccat gcaggccgtg gaggactgtg gccaagagaa tcaccaggct
 1020
 cctgtgcccc cgcagcctga tgacctctcc attgtgtgtt tcacaagcgg cagcacagg
 1080
 aacccaaaag gtgcgatgct caccatggg aacgtggtg ctgatttctc aggtttctg
 1140
 aaagtgcag agagtcagt ggctccact tgtgcggatg tgcacatttc ctatttgct
 1200
 ttagcacaca tgtttgagcg aatggtgcag tctgtcgtct attgccacgg agggcgtgtt
 1260

<213> Homo sapiens

<400> 5180

Gly Thr Gln Ala Met Pro Pro Pro Leu Ser Trp Asp Tyr His Gln Cys
 1 5 10 15
 Thr Trp Asn Tyr Glu Val Glu Pro Asp Val Lys Ala Val Asp Ala Gly
 20 25 30
 Phe Asp Gly His Asp Ile Pro Tyr Asp Ala Met Trp Leu Asp Ile Glu
 35 40 45
 His Thr Glu Gly Lys Arg Tyr Phe Thr Trp Asp Lys Asn Arg Phe Pro
 50 55 60
 Asn Pro Lys Arg Met Gln Glu Leu Leu Arg Asn Lys Lys Arg Lys Leu
 65 70 75 80
 Val Val Ile Ser Asp Pro His Ile Lys Ile Glu Pro Asp Tyr Ser Val
 85 90 95
 Tyr Val Lys Ala Lys Asp Gln Gly Phe Phe Val Lys Asn Gln Glu Gly
 100 105 110
 Glu Asp Phe Glu Gly Val Cys Trp Pro Gly Leu Ser Ser Tyr Leu Asp
 115 120 125
 Phe Thr Asn Pro Lys Val Arg Glu Trp Tyr Ser Ser Leu Phe Ala Phe
 130 135 140
 Pro Val Tyr Gln Gly Ser Thr Asp Ile Leu Phe Leu Trp Asn Asp Met
 145 150 155 160
 Asn Glu Pro Ser Val Phe Arg Gly Pro Glu Gln Thr Met Gln Lys Asn
 165 170 175
 Ala Ile His His Gly Asn Trp Glu His Arg Glu Leu His Asn Ile Tyr
 180 185 190
 Gly Phe Tyr His Gln Met Ala Thr Ala Glu Gly Leu Ile Lys Arg Ser
 195 200 205
 Lys Gly Lys Glu Arg Pro Phe Val Leu Thr Arg Ser Phe Phe Ala Gly
 210 215 220
 Ser Gln Lys Tyr Gly Ala Val Trp Thr Gly Asp Asn Thr Ala Glu Trp
 225 230 235 240
 Ser Asn Leu Lys Ile Ser Ile Pro Met Leu Leu Thr Leu Ser Ile Thr
 245 250 255
 Gly Ile Ser Phe Cys Gly Ala Asp Ile Gly Gly Phe Ile Gly Asn Pro
 260 265 270
 Glu Thr Glu Leu Leu Val Arg Trp Tyr Gln Ala Gly Ala Tyr Gln Pro
 275 280 285
 Phe Phe Arg Gly His Ala Thr Met Asn Thr Lys Arg Arg Glu Pro Trp
 290 295 300
 Leu Phe Gly Glu Glu His Thr Arg Leu Ile Arg Glu Ala Ile Arg Glu
 305 310 315 320
 Arg Tyr Gly Leu Leu Pro Tyr Trp Tyr Ser Leu Phe Tyr His Ala His
 325 330 335
 Val Ala Ser Gln Pro Val Met Arg Pro Leu Trp Val Glu Phe Pro Asp
 340 345 350
 Glu Leu Lys Thr Phe Asp Met Glu Asp Glu Tyr Met Leu Gly Ser Ala
 355 360 365
 Leu Leu Val His Pro Val Thr Glu Pro Lys Ala Thr Thr Val Asp Val
 370 375 380
 Phe Leu Pro Gly Ser Asn Glu Val Trp Tyr Asp Tyr Lys Thr Phe Ala
 385 390 395 400
 His Trp Glu Gly Gly Cys Thr Val Lys Ile Pro Val Ala Leu Asp Thr

gaagttgagc cggatgtaaa agcagtggat gcagggtttg atgggcatga cattccttat
120
gatgccatgt ggctggacat agagcacact gagggcaaga ggtacttcac ctgggacaaa
180
aacagattcc ctaaccccaa gaggatgcaa gagctgctca ggaacaaaaa gcgtaagctt
240
gtggatcatca gtgatcccca catcaagatt gaacctgact actcagtata tgtgaaggcc
300
aaagatcagg gcttctttgt gaagaatcag gaaggggaag actttgaagg ggtgtgttgg
360
ccaggtctct cctcttacct ggatttcacc aatcccaagg tcagagagtg gtattcaagt
420
ctttttgctt tccctgttta tcagggatct acggacatcc tcttcctttg gaatgacatg
480
aatgagcctt ctgtcttttag agggccagag caaaccatgc agaagaatgc cattcatcat
540
ggcaattggg agcacagaga gctccacaac atctacggtt tttatcatca aatggctact
600
gcagaaggac tgataaaacg atctaaaggg aaggagagac cctttgttct tacacgttct
660
ttctttgctg gatcacaaaa gtatgggtgcc gtgtggacag gcgacaacac agcagaatgg
720
agcaacttga aaatttctat cccaatgtta ctactctca gcattactgg gatctctttt
780
tgcgagctg acataggcgg gttcattggg aatccagaga cagagctgct agtgcgttgg
840
taccaggctg gagectacca gcccttcttc cgtggccatg ccaccatgaa caccaagcga
900
cgagagccct ggctcttttg ggaggaacac acccgactca tccgagaagc catcagagag
960
cgctatggcc tctgcccata ttggtattct ctgttctacc atgcacacgt ggcttcccaa
1020
cctgtcatga ggcctctgtg ggtagagttc cctgatgaac taaagacttt tgatatggaa
1080
gatgaataca tgctggggag tgcattattg gttcatccag tcacagaacc aaaagccacc
1140
acagttgatg tgtttcttcc aggatcaa atgaggtctggt atgactataa gacatttgct
1200
cattgggaag gaggtgtac tgtaaagatc ccagtagcct tggacactat tccagtgttt
1260
cagcgagggtg gaagtgtgat accaataaag acaactgtag gaaaatccac aggctggatg
1320
actgaatcct cctagggact ccgggttgct ctaagcacta agggttcttc agtgggtgag
1380
ttatatcttg atgatggcca ttcattccaa tacctccacc agaagcaatt tttgcacagg
1440
aagttttcat tctgttccag tgttctgac aatagttttg ctgaccagag gggtcattat
1500
cccagcaagt gtgtggtgga gaagatc
1527

<210> 5180

<211> 444

<212> PRT

<212> DNA

<213> Homo sapiens

<400> 5177

```

ntcctagtga gtatcgagtt ggtcttatta tcgcgtgaac tgggagcctt tgtttcctgc
60
gtgtcgcagg aagtgcggtt tcgggtacag ccgctaccag agtccctttc tcgcgaggcg
120
gaagaacccc gatcgtgag gagcaagggg gcgctaggaa agggaactgg gttgcgacgg
180
tccggcgaga gagagctggg gtgctggggg gcggggaagt tggggagcag aggccgcttg
240
gtgtccgagt agggtaagac cgcaccgacc cagtccgtta ggaaagaagg gaaacgaggc
300
aattgtcggg cggatccccg gacggagggc taaggttgtg tggaaggcgc tgctccccgg
360
atggcgaccg cagatactcc ggccccggcc tccagtggcc tctcgccgaa ggaagaaggg
420
gagcttgaag atggggaaat cagtgcgac gataataaca gccagatacg gagtcggagc
480
agcagcagca gcagcggcgg cgggctgtta ccctatccgc ggcgaaggcc tcctcactcg
540
gccccggggc gtggatctgg cggaggcggg ggcctcttct cgtcatcgtc ctcttctcag
600
cagcagctga ggaatttctc acgctcgcgg cagcgcg
637

```

<210> 5178

<211> 92

<212> PRT

<213> Homo sapiens

<400> 5178

```

Met Ala Thr Ala Asp Thr Pro Ala Pro Ala Ser Ser Gly Leu Ser Pro
1          5          10         15
Lys Glu Glu Gly Glu Leu Glu Asp Gly Glu Ile Ser Asp Asp Asp Asn
          20         25         30
Asn Ser Gln Ile Arg Ser Arg Ser Ser Ser Ser Ser Gly Gly Gly
          35         40         45
Leu Leu Pro Tyr Pro Arg Arg Pro Pro His Ser Ala Arg Gly Gly
          50         55         60
Gly Ser Gly Gly Gly Gly Gly Ser Ser Ser Ser Ser Ser Ser Ser Gln
65         70         75         80
Gln Gln Leu Arg Asn Phe Ser Arg Ser Arg His Ala
          85         90

```

<210> 5179

<211> 1527

<212> DNA

<213> Homo sapiens

<400> 5179

```

ggaacacagg ccattgccgc tcctctctct tgggattacc accagtgcac ctggaactat
60

```

<213> Homo sapiens

<400> 5174

```

Met Glu Leu Ala Glu Glu Gly Arg Val Ser Cys Gly Glu Leu Trp Leu
 1           5           10           15
Glu Val Glu Gly Val His Ser Lys Leu Glu Glu Leu Ser Arg Val Leu
      20           25           30
Glu Thr Lys Arg Ser Pro Leu Gly Thr Val Leu Ser Pro Gly Ala Glu
      35           40           45
Thr Asp Arg Gly Ser Leu Leu Gly Pro Pro Glu Lys Arg Cys Pro Asp
      50           55           60
Ile Trp Cys Ser Gln Ala Val Ser Pro Ala Gly Leu Cys Phe Pro Asp
65           70           75           80
Arg Gln Thr Ser Pro Ser Leu Ser Leu Ser Gly Lys Met
      85           90

```

<210> 5175

<211> 272

<212> DNA

<213> Homo sapiens

<400> 5175

```

ccatggcagc tccagagacc aggtggaggg gaaatcaccc cacgctcccg agcagagagc
60
ttcggagcca gccagcctca ctgtgcgtgg cccacaacag ctgtctccat gtgtcacgtg
120
agggctgccc aacaccaggt agggcagcaa cgcccacgcc ctgcgcgggc acagcctccc
180
agaggtcact gccatgccgc actgaccgga gagagggcag tggtagagagg tgcattgccac
240
cccaggttg ttccgaaggc ccnnnnnncc nc
272

```

<210> 5176

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5176

```

Met Ala Ala Pro Glu Thr Arg Trp Arg Gly Asn His Pro Thr Leu Pro
 1           5           10           15
Ser Arg Glu Leu Arg Ser Gln Pro Ala Ser Leu Cys Val Ala His Asn
      20           25           30
Ser Cys Leu His Val Ser Arg Glu Gly Cys Pro Thr Pro Gly Arg Ala
      35           40           45
Ala Thr Pro Thr Pro Ser Pro Gly Thr Ala Ser Gln Arg Ser Leu Pro
      50           55           60
Cys Arg Thr Asp Arg Arg Glu Gly Ser Gly Glu Arg Cys Met Pro Pro
65           70           75           80
Gln Ala Cys Ser Glu Gly Pro Xaa Xaa Xaa
      85           90

```

<210> 5177

<211> 637

aaaaaaaaaa aaaaaaaaaa

2060

<210> 5172

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5172

```

Met Leu Val Asn Gly Glu Asn Phe Gly Val Ser Leu Asn Ile Phe Pro
 1           5           10           15
Ser Val Ala Ile Asn Lys Ser Ser Gly Ala Pro Arg Arg Val Pro Ala
 20           25           30
Gln Gly Ser Ile Lys Asp His Thr Ala Gly Leu Arg Leu Thr Ala Leu
 35           40           45
Ser Pro Glu His Gln Ser Pro Ala Glu Ser Gly Asp Asn Thr Ser Ser
 50           55           60
Leu Gln Arg Gly Thr Ser Pro Pro Ala Ala Thr Ser Leu Arg Leu Leu
 65           70           75           80
Leu Ser Ser Lys Asp Ser Leu Gly Phe Lys Cys His Phe Pro Cys Phe
 85           90           95
Arg Asp Pro Gly Val Leu Ile Ala
100

```

<210> 5173

<211> 557

<212> DNA

<213> Homo sapiens

<400> 5173

```

ctttgatgcc ttattgatt caacacatgc ttattatag cttgctgtgt gccgggcccc
60
agaccaggcg ctggagacac agcagtgaac atactaacat tgtttctgcc ctcacggagc
120
tcacagtgtg acagggagac aaatagacct gtcagtagat aacatgaaaa taattggact
180
atgtgctgca gacacaatat ccaggtctta tgagaatgtc aatacagact tcacgtggga
240
aatggtgagg caataaggat cgtttccctt gatgaaatgg agcttgacaga agaaggcagg
300
gtcagttgtg gggagctctg gttggagggtg gagggagtgc attccaagct ggaggagctg
360
tccagggttc tggagactaa acggagcccc ctgggaactg tcttgagccc cgggtgctgaa
420
acagatcgcg gttctcttct cggacctccc gagaagcgct gtccggatat ttggtgctcc
480
caagcagtca gccctgctgg tctctgcttt ccagaccggc aaacttcgcc gtctctgtcc
540
ctttctggga aaatggc
557

```

<210> 5174

<211> 93

<212> PRT

acagcgagga tggaaatgga aaggaaccga actaaaatgc atttcccttt gcagggcaga
480
gagctaagct cttaggaata gtgttataga aataagcacc ctaacttcaa ttcctgaaaa
540
tgttgggttaa tggagagaat tttggagttt cacttaatat tttcccatcg gtcgccataa
600
ataagtcttc aggcgtcctt agaagagtcc cagcccaagg ctcgattaag gaccacactg
660
cagggtctgag gctcactgct ctgagtcctg aacaccagag ccctgcagag agtgggtgata
720
acacatcatc tctgcaaaga ggaacctctc ccccgccgc cacttcactc aggttctac
780
tgagcagcaa ggacagcctg ggtttcaaat gccacttccc ctgctttagg gatccagggtg
840
tcctgatagc gtgaccctgc tgaggcaagg tatcaactcc gagagtgact gagtactga
900
gcgtggcaca tgaacaaacg tcatgacaaa gattctctga gtgaagttaa caccacgtat
960
tttaccttg caaaaaacaa actggcaccc tgagttctaa ctacggacgg acgatattct
1020
tgctccaca ccagattcc tggaaatggc taacgtttcc tttctagggg aagggtcgag
1080
gaatactcaa gtgctagctt agcagctttg ttcagtcag atcagagctg ttaggtaaag
1140
gcctaaccac ctccctgcag tctcttatat ctcaagcttt aggaacccat ttctaaatgt
1200
acactagcgg agaatttata ttgtcagcct tgattaccat aggacaggca gaaaggcgat
1260
aatttgtatc ttttaataa aaagaagctt ttaacttttc cagcctatta ttataactga
1320
gttatattca ctgtggctca aactaattgg cattgtggaa catttcttta ccttcaaagt
1380
tttctccacc aatcatttca gttctattgc agtcctggtg ccatatgtcc cctgcaaatt
1440
gtgaaagtaa ttagtgacaa aatagcagcc tgctcctttt caatggcgaa actgtcggca
1500
ttagcagttt tgggtaagct ggcggtacta taacacgtac tggaaacctg ttcctcatca
1560
ccacctacca gattctggaa atgcctgctt ctagaaaacg atggcggttg tgggtggtctt
1620
cttttgaaag gaacagtaat ttgtgtggat attgttaaag tgtttaaga atattttgac
1680
aattaagttt acattttaca attgctttat tttttattaa aatagttgta tataaatatt
1740
accctatttc actgttggtc aagtaaactt aaaccttgta gacaagtga tccctgata
1800
tgtatagaag ctgtgatata tagagtacat ttattgtgta aatgtttatg aatataattg
1860
ttcctgtgtt tttataagtt ggggatattt tgtgtttta cggcaacaaa atttattgca
1920
tttaaatggt tttatgtaa tagaaatcac gcaaaatagt gaaggattta aaatatgtat
1980
atgatacatg taaatgtaca aacttttaga agaaataaat ccaacaaatt tcaaaaaaaaa
2040

<210> 5170
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 5170
 Thr Gly Gly Phe Ala Leu Tyr Pro Leu Leu Asn Glu Ala Ala Pro Leu
 1 5 10 15
 Ala Leu Gly Ala Gly Leu Val Pro Glu Glu Leu Pro Pro Ser Arg Gly
 20 25 30
 Gly Leu Gly Glu Ala Leu Gly Ala Val Glu Leu Ser Leu Ser Glu Phe
 35 40 45
 Leu Leu Leu Phe Thr Thr Ala Gly Ile Tyr Val Asp Gly Ala Gly Arg
 50 55 60
 Lys Ser Arg Gly His Glu Leu Leu Trp Pro Ala Ala Pro Met Gly Trp
 65 70 75 80
 Gly Tyr Ala Ala Pro Tyr Leu Thr Val Phe Ser Glu Asn Ser Ile Asp
 85 90 95
 Val Phe Asp Val Arg Arg Ala Glu Trp Val Gln Thr Val Pro Leu Lys
 100 105 110
 Lys Val Arg Pro Leu Asn Pro Glu Gly Ser Leu Phe Leu Tyr Gly Thr
 115 120 125
 Glu Lys Val Arg Leu Thr Tyr Leu Arg Asn Gln Leu Ala Glu Lys Asp
 130 135 140
 Glu Phe Asp Ile Pro Asp Leu Thr Asp Asn Ser Arg Arg Gln Leu Phe
 145 150 155 160
 Leu Thr Lys Ser Lys Arg Arg Phe Phe Phe Arg Val Ser Glu Glu Gln
 165 170 175
 Gln Lys Gln Gln Arg Arg Glu Met Leu Lys Asp Pro Phe Val Arg Ser
 180 185 190
 Lys Leu Ile Ser Pro Pro Thr Asn Phe Asn His
 195 200

<210> 5171
 <211> 2060
 <212> DNA
 <213> Homo sapiens

<400> 5171
 gaacagaggg ggtggaaact gcatcacaga tgttttccaa ggtccagggt ggaatctgag
 60
 ctctagtgtc tgactttgag atgcattata tttttaacac ataatgagg ggaatccatat
 120
 cacattcttt cttgtggacc accaaattga aggcctttctt gtaattcaca agcagcagct
 180
 ctccagcadc tctccgtagc ctgggtgaag tccagaagc tgggtgtgcat cattttccaa
 240
 ggtggcagag ctgcttgctc tgcagatcat tcctttgaga gaggagtaca agtgaagaaa
 300
 caaggaggca cttcctgtag gagcactgat gtgccttgct cacactcccc tctgagcttt
 360
 actggtaaga gagctccgac tgaacatgct gagcagttga gcacttttcc atcagcaaca
 420


```
<210> 5169
<211> 609
<212> DNA
<213> Homo sapiens
```

4350

450		455		460											
Arg	Ala	Asp	Gly	Leu	Phe	Tyr	Pro	Ser	Ala	Phe	Ser	Phe	Thr	Tyr	Thr
465			470			475								480	
Pro	Glu	Tyr	Ser	Val	Arg	Pro	Gly	His	Pro	Gly	Val	Pro	Glu	Pro	Ala
			485					490						495	
Thr	Asp	Ala	Asp	Ala	Leu	Leu	Glu	Ser	Ile	His	Gln	Glu	Phe	Thr	Arg
		500					505						510		
Thr	Asn	Phe	His	Leu	Phe	Ile	Gln	Thr							
		515					520								

<210> 5167

<211> 878

<212> DNA

<213> Homo sapiens

<400> 5167

```

gggccccgga ccaggcgctg gggacacagc agtgaaaata ctaacattgt ttctgccctc
60
acggagctca cagtgtaca gggagacaaa tagacctgtc agtagataac atgaaaataa
120
ttggactgtg tgctgcagac acaatatccc aggtctatga gaattgcaat acagacttca
180
cgtgggaaat ggtgaggcaa taaggatcgt ttcccttgat gaaatggagc ttgcagaaga
240
aggcagggtc agttgtgggg agctctgggt ggaggtggag ggagtgcatt ccaagctgag
300
ccaagctatg acacctgagt ttccctgcctc tgtgctgcct cctgttttc cattccccgt
360
tctcagcttc acttgtgggc tgagagtcctc tgcgtgggtt atttttctgc ctttctcagg
420
gccttgggtt ccccaaagt cacatgggca cagtaacacc catgtcctag ggttgaagat
480
ggcatgatag gatgtatgta aaatgcttgg cacaagggtt ctcaccgaag tctggaggag
540
ctgtccaggg ttctggagac gaaacggagc ccgctgggaa ctgtcctgag ccccggtgct
600
gaaacagatc gcggttctct tctcgacct cccgagaggc gctgtccgga tatttggtgc
660
tcccagcag tcagccctgc tggctctctgc ttccagacc gtcaaacttc gccatctctg
720
tccctttttg ggaaaatgtc catgcgcaa cctgcaaacc agcctcattc ccggcatccc
780
acgtccctca gaccaccct cctcccagc agctgaggga ctccccctct gtgtgectca
840
cctgcttcca gtctgtgtgg cagatgcagg tgtcccg
878

```

<210> 5168

<211> 199

<212> PRT

<213> Homo sapiens

<400> 5168

```

Met Pro Gly Met Arg Leu Val Cys Arg Leu Ala His Gly His Phe Pro

```

20 25 30
 Ala Asp Arg Arg Ser Leu Pro Gly Thr Trp Thr Arg Ser Ser Pro Glu
 35 40 45
 His Thr Thr Ile Leu Arg Gly Gly Val Arg Arg Cys Leu Gln Gln Gln
 50 55 60
 Cys Glu Gln Thr Val Arg Ile Leu His Ala Lys Val Ala Gln Lys Ser
 65 70 75 80
 Tyr Gly Asn Glu Lys Arg Phe Phe Cys Pro Pro Pro Cys Val Tyr Leu
 85 90 95
 Ser Gly Pro Gly Trp Arg Val Lys Pro Gly Gln Asp Gln Ala His Gln
 100 105 110
 Ala Gly Glu Thr Gly Pro Thr Val Cys Gly Tyr Met Gly Leu Asp Ser
 115 120 125
 Ala Ser Gly Ser Ala Thr Glu Thr Gln Lys Leu Asn Phe Glu Gln Gln
 130 135 140
 Pro Asp Ser Arg Glu Phe Gly Cys Ala Lys Thr Leu Tyr Ile Ser Asp
 145 150 155 160
 Ala Asp Lys Arg Lys His Phe Arg Leu Val Leu Arg Leu Val Leu Arg
 165 170 175
 Gly Gly Arg Glu Leu Gly Thr Phe His Ser Arg Leu Ile Lys Val Ile
 180 185 190
 Ser Lys Pro Ser Gln Lys Lys Gln Ser Leu Lys Asn Thr Asp Leu Cys
 195 200 205
 Ile Ser Ser Gly Ser Lys Val Ser Leu Phe Asn Arg Leu Arg Ser Gln
 210 215 220
 Thr Val Ser Thr Arg Tyr Leu Ser Val Glu Asp Gly Ala Phe Val Ala
 225 230 235 240
 Ser Ala Arg Gln Trp Ala Ala Phe Thr Leu His Leu Ala Asp Gly His
 245 250 255
 Ser Ala Gln Gly Asp Phe Pro Pro Arg Glu Gly Tyr Val Arg Tyr Gly
 260 265 270
 Ser Leu Val Gln Leu Val Cys Thr Val Thr Gly Ile Thr Leu Pro Pro
 275 280 285
 Met Ile Arg Lys Val Ala Lys Gln Cys Ala Leu Leu Asp Val Asp
 290 295 300
 Glu Pro Ile Ser Gln Leu His Lys Cys Ala Phe Gln Phe Pro Gly Ser
 305 310 315 320
 Pro Pro Gly Gly Gly Gly Thr Tyr Leu Cys Leu Ala Thr Glu Lys Val
 325 330 335
 Val Gln Phe Gln Ala Ser Pro Cys Pro Lys Glu Ala Asn Arg Ala Leu
 340 345 350
 Leu Asn Asp Ser Ser Cys Trp Thr Ile Ile Gly Thr Glu Ser Val Glu
 355 360 365
 Phe Ser Phe Ser Thr Ser Leu Ala Cys Thr Leu Glu Pro Val Thr Pro
 370 375 380
 Val Pro Leu Ile Ser Thr Leu Glu Leu Ser Gly Gly Gly Asp Val Ala
 385 390 395 400
 Thr Leu Glu Leu His Gly Glu Asn Phe His Ala Gly Leu Lys Val Trp
 405 410 415
 Phe Gly Asp Val Glu Ala Glu Thr Met Tyr Arg Tyr Gly Val Xaa Ser
 420 425 430
 Pro Arg Ser Leu Val Cys Val Val Pro Asp Val Ala Ala Phe Cys Ser
 435 440 445
 Asp Trp Arg Trp Leu Arg Ala Pro Ile Thr Ile Pro Met Ser Leu Val

gtgcaatttc aggcctctcc ctgccccaaag gaggcgaaca gggctctgct taacgacagc
 1140
 tcttgctgga ccatcatcgg caccgagtcg gtggaatttt ccttcagcac cagcctggcg
 1200
 tgtaccctgg agccggtcac tccggtgcct ctcatcagca ccctagagct gagcggcggg
 1260
 ggcgacgtgg ccacgctgga gctccacgga gagaacttcc acgcggggct caagggtgtg
 1320
 tttggggacg tggaggcaga aaccatgtac aggtacgggg tgnngagccc gcggtccctg
 1380
 gtgtgcgtgg tgccggacgt ggcggccttc tgcagcgact ggcgctggct gcgcgctccc
 1440
 atcacaatcc ccatgagcct ggtgcgcgcc gacgggctct tctaccctag tgccttctcc
 1500
 ttcacctaca ccccggaata cagcgtgcgg ccgggtcacc ccggcgctcc cgagcccgcc
 1560
 accgacgccg acgcgctcct ggagagcatc catcaggagt tcacgcgcac caacttccac
 1620
 ctcttcatcc agacttaggc gcgcccggtg gccccggctg cccaccctgg agggctgcgc
 1680
 ccgcgccagg cgccggggacg tgtttctggg ttctaggccc tgcttccttg cccctttgct
 1740
 gcagaagggc agctgaaggc tcaccctaga aaccgggcct ggtgggtctt acccggctca
 1800
 ctccctccct tgtccttaca catacaggaa gacaagacct gagtgggtgt gtctttgtgt
 1860
 ccgtcgtgta tggtctctcc tgtcttcatt tcttctcact ctgtctctaa acctctctct
 1920
 ctctcccttc cccctcagta cttagtctac agacctatgt gcgtgtccct atccttctgt
 1980
 ccttttctct cttcagctct cctgectct caccacaaat tttacatgcc ccgaggagcc
 2040
 aagtttggga catttacct ccaggcatct atgtccctc ttgaagagaa aacacacagc
 2100
 ttcacacatc caggcatagg gggcaagctc ttggggcatc aggaccctgg agcaccaggt
 2160
 ccttctctga atattagatc cacctggaga accgggtctc tctaagtctc acctggggaa
 2220
 ttcgggccca cctggggcac cagtccccc ctagagcact gtgtcctgcc ctagagcaca
 2280
 aagacctgct cctcccgaga ctctctctga ctgcagccag gcatagtacc cttgcctgtg
 2340
 tttgtccct ggtccacaga tttggtggct
 2370

<210> 5166

<211> 521

<212> PRT

<213> Homo sapiens

<400> 5166

Met	Asp	Pro	Ala	Gly	Ala	Ala	Asp	Pro	Ser	Val	Pro	Pro	Asn	Pro	Leu
1				5				10					15		
Thr	His	Leu	Ser	Leu	Gln	Asp	Arg	Ser	Glu	Met	Gln	Leu	Gln	Ser	Glu

130		135		140
Gly Leu Gly Ser Met Ala His Cys Ser Gly Val Thr Tyr Tyr Gly Leu				
145		150		155
Trp Ile Asn Gly His Pro Ala Glu Gln Ala Thr Arg Ile Val Ile Leu				
	165		170	175
Gly Pro Glu Val Met Glu Val Ala Gln Gly Ser Pro Phe Ser Val Asn				
	180		185	190
Val Gln Leu Leu Gln Asp His Gly Glu Ile Ala Lys Ser Lys His Leu				
	195		200	205
Gln Gly Glu Met Thr				
210				

<210> 5165

<211> 2370

<212> DNA

<213> Homo sapiens

<400> 5165

```

cagtccagtg ctgctgtcgc tggaaccctg cagagggcgg tgggtgagcg gctggggccc
60
cgtggagcca ccatggaccc cgcaggggca gcagaccct cagtgcctcc caatcctttg
120
actcacctga gcctgcagga cagatcagag atgcagctgc agagcgaagc cgacaggcgg
180
agcctcccgg gcaattggac caggatcatcc ccagagcaca ccaccattct gaggggaggc
240
gtgcgcaggt gcctgcagca acagtgtgaa cagactgtgc ggatcctgca tgccaagggtg
300
gcccagaaat catacggaaa tgagaagcgg ttcttctgcc ccccgccctg tgtctacctc
360
tcggggcctg gctggagggt gaagccaggg caggatcaag ctcaccaggc gggggaaacg
420
gggcccacgg tctgcggtta catgggactg gacagcgcgt ccggcagcgc cactgagacg
480
cagaagctga atttcgagca gcagccggac tccaggaat tcggctgcgc caagaccctg
540
tacatctcag atgcagacaa gaggaagcac ttctggctgg tgctgcggct ggtgctgcgc
600
ggggggccgg agctgggtac cttccacagc cgccttatca aggtcatctc gaagccctcg
660
cagaagaagc agtcgctgaa aaacaccgat ctgtgcatat cctccggctc aaaggtctcc
720
ctcttcaacc gcctgcgctc tcagacggtc tccacacgct acctctctgt ggaggatggg
780
gcctttgtgg ccagtgcacg acagtgggct gccttcacgc tccacctggc tgatggggcac
840
tctgcccgaag gagacttccc accgcgagag ggctacgttc gctatggctc cctggtgcag
900
ctcgtctgca cggtcaccgg catcacacta cctcccatga tcatccgtaa agtagcaaaa
960
cagtgtgcgc tccttgatgt ggatgagccc atctcccagc tgcacaagtg tgcattccag
1020
tttccaggca gtccccagg aggggggtggc acctacttat gccttgccac agagaagggtg
1080

```

gatggcagtt attacgaagg ggcgtttgtg gacggagaga tcacgggaga aggccgccgg
 360
 cactgggcct ggtcaggaga caccttctct ggacagtttg ttctgggaga gcctcaaggc
 420
 tacggcgtca tggagtacaa agccggcgga tgttatgaag gggaggtctc ccacggcatg
 480
 cgggaaggac acgggtttct ggtggaccgg gatggacaag tgtaccaggg ctccctccat
 540
 gacaacaaga ggcacggccc tgggcagatg ctctttcaga acggtgacaa gtacgacggc
 600
 gactgggtcc gggaccggcg tcagggacac ggggtgctgc gctgcgccga cggctccacc
 660
 tacaagggac agtggcacag cgacgtcttc agtggactgg gcagcatggc ccaactgctca
 720
 ggggtcacct attatgggtt gtggatcaat ggccaccag cagaacaagc tacgaggatc
 780
 gtgatcttgg gtccggaggt gatggaagtg gcccagggt ctcccttctc ggtgaacgtt
 840
 cagctgctgc aggaccacgg ggaaattgcc aagagtaagc atctccaggg ggagatgacc
 900
 taacgtttcc aaaagagaaa caggcagcag gttcttaagc agtgaagatg cggacgagat
 960
 gttgcatgtg gtcctgagg cacagcagtg acttcgtgcc cagagcctgg cagagaggtc
 1020
 gcaggtgtgc cagcttccct gccagtcagg gcagccttgg gtgtgtgtgc aagcatgtgt
 1080
 gcacatattg tgtgatgtgc gtgctcctgt atgtgtgtgc atatgtgtgt atgccttgca
 1140
 caggtgtgca caggtctgaa tgtgtatacg tgtggggggg cacgcgt
 1187

<210> 5164

<211> 213

<212> PRT

<213> Homo sapiens

<400> 5164

Arg Phe Leu Leu Pro Gly His Gly Lys Leu Leu Phe Lys Asp Gly Ser
 1 5 10 15
 Tyr Tyr Glu Gly Ala Phe Val Asp Gly Glu Ile Thr Gly Glu Gly Arg
 20 25 30
 Arg His Trp Ala Trp Ser Gly Asp Thr Phe Ser Gly Gln Phe Val Leu
 35 40 45
 Gly Glu Pro Gln Gly Tyr Gly Val Met Glu Tyr Lys Ala Gly Gly Cys
 50 55 60
 Tyr Glu Gly Glu Val Ser His Gly Met Arg Glu Gly His Gly Phe Leu
 65 70 75 80
 Val Asp Arg Asp Gly Gln Val Tyr Gln Gly Ser Phe His Asp Asn Lys
 85 90 95
 Arg His Gly Pro Gly Gln Met Leu Phe Gln Asn Gly Asp Lys Tyr Asp
 100 105 110
 Gly Asp Trp Val Arg Asp Arg Arg Gln Gly His Gly Val Leu Arg Cys
 115 120 125
 Ala Asp Gly Ser Thr Tyr Lys Gly Gln Trp His Ser Asp Val Phe Ser

tatcttttga ataaagattt gatttttaaac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaa
 1645

<210> 5162
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 5162
 Met Val Ala Pro Val Thr Gly Tyr Ser Leu Gly Val Arg Arg Ala Glu
 1 5 10 15
 Ile Lys Pro Gly Val Arg Glu Ile His Leu Cys Lys Asp Glu Arg Gly
 20 25 30
 Lys Thr Gly Leu Arg Leu Arg Lys Val Asp Gln Gly Leu Phe Val Gln
 35 40 45
 Leu Val Gln Ala Asn Thr Pro Ala Ser Leu Val Gly Leu Arg Phe Gly
 50 55 60
 Asp Gln Leu Leu Gln Ile Asp Gly Arg Asp Cys Ala Gly Trp Ser Ser
 65 70 75 80
 His Lys Ala His Gln Val Val Lys Lys Ala Ser Gly Asp Lys Ile Val
 85 90 95
 Val Val Val Arg Asp Arg Pro Phe Gln Arg Thr Val Thr Met His Lys
 100 105 110
 Asp Ser Met Gly His Val Gly Phe Val Ile Lys Lys Gly Lys Ile Val
 115 120 125
 Ser Leu Val Lys Gly Ser Ser Ala Ala Cys Asn Gly Leu Leu Thr Asn
 130 135 140
 His Tyr Val Cys Glu Val Asp Gly Gln Asn Val Ile Gly Leu Lys Asp
 145 150 155 160
 Lys Lys Ile Met Glu Ile Leu Ala Thr Ala Gly Asn Val Val Thr Leu
 165 170 175
 Thr Ile Ile Pro Ser Val Ile Tyr Glu His Met Val Lys Lys Leu Pro
 180 185 190
 Pro Val Leu Leu His His Thr Met Asp His Ser Ile Pro Asp Ala
 195 200 205

<210> 5163
 <211> 1187
 <212> DNA
 <213> Homo sapiens

<400> 5163
 nngtagagac ggggctctcc gtgttgctca ggctggctgc tgcacttcga ttctgtgct
 60
 tgttctggct gaaggcgccg gccgctcaag cgtgtttcgg cagatatttt tgagaacatt
 120
 tttttatttt taaatacatg tatagcatga gtgatggagc caaacacaag ttttgaagcc
 180
 aagctcttgg ttctgagaaa caggcccaac actgcacagt gtcattcgca gtcaacccaa
 240
 ccactgtctg agttcacgtg acgatttctc ctgccaggtc acgggaagtt gttattttaa
 300

<400> 5161
ntggggcccc cagatttgcg ccattgcact ccagccttgg gacttgacgc ttctgaaacc
60
aaaggagag caaaagcagc egggagcgcg cgggccgacc tggttctcct ccctccac
120
ggctgcctta gtacagaatc ttataagtcc tctccctca gaggtacag atggtgttcc
180
gaggccaggg gagtttaaag, ctcgatttca cccgcgcagc ctccaatccg ggtgttctga
240
gaatcagcca tgatcatcct gtacccatct ctagaggacc taaaagtga ccaagccatt
300
caggcccagg tcagagcctc acccaagatg ccagccctgc cagtccaggc aacagccatt
360
tccccaccac cagttttgta, cccaaacttg gcagaactgg, aaaattatat gggctcttcc
420
ctctccagcc aagaagtcca ggagagcctg cttcagattc cagaggggtga cagtacagcg
480
gtctcggggc cggggcccgg ccagatggtg gcaccggtaa cgggtacag cctgggcgtg
540
cggcgagctg agatcaagcc cggggtgcgc gagatccacc tgtgcaagga cgagcgcggc
600
aagaccgggc tgaggctgcg gaaggctgac caggggctct ttgtgcagtt ggtccaggcc
660
aacacccctg catcccttgt ggggctgcgc tttggggacc agctcctgca gattgacggg
720
cgtgactgtg ctgggtggag ctgcacaaa gcccatcagg tgggaagaa ggcatcaggc
780
gataagattg tcgtggtggt tcgggacagg ccgttccagc ggactgtcac catgcacaag
840
gacagcatgg gccacgtcgg cttcgtgatc aagaagggga agattgtctc tctggtaaa
900
gggagtctg cgccctgcaa cgggctctc accaaccact acgtgtgtga ggtggacggg
960
cagaatgtta tcgggtgaa ggacaaaaag atcatggaga ttctggccac ggctgggaac
1020
gttgtcacc tgaccatcat cccagtggtg atctacgagc acatggtcaa aaagttgcct
1080
ccagtccctg tccaccacac catggaccac tccatcccag atgctgaag cactggagg
1140
gcagggcagg cagggggggc ttcccgccct cctgcagcaa agggcaacca cctcggatg
1200
atgggttgca gccggcctgc tgcttaaggt gggggctgcc atgagggggg cgtgtccagg
1260
agggtgacca tgggatggct tatacacaca ggctccttg gagcctcaga ctccaagcta
1320
ggctgaggct caggcagggc ccacaggcag ccgattctct tgtgtgatt taaatgctgg
1380
acacggaggc aggtgttta aacgtgctt aaagtgcga ctggggccct ttcaagaaat
1440
tttctctac caggaaaaca gttacacatt ttaagagaac agagctacgt tctttgtgag
1500
agctttttcc ttggcttgac ttgctctttg tcacagactg cataagttgt cagccttgac
1560


```
<210> 5161
<211> 1645
<212> DNA
<213> Homo sapiens
```

```

      35      40      45
Tyr Ala Met Val Asp Pro Glu Asp Ile Ser Ile Thr Glu Leu Tyr Arg
  50      55      60
Leu Ser Met Leu Ile Met Phe Leu Leu Gly Gly Val Ile Gln Met Glu
  65      70      75      80
His Arg His Arg Lys Lys Asp Thr Pro Val Gln Ala Ser Ser His His
      85      90      95
Leu Phe Val Gln Met Lys Ser Leu Met Cys Ser Asn Leu Gly Glu Glu
      100      105      110
Leu Glu Val Ile Phe Ser Leu Phe Asp Ser Lys Glu Asn Arg Pro Ile
      115      120      125
Ser Glu Arg Phe Phe Leu Arg Leu Asn Arg Asn Gly Leu Pro Lys Ala
      130      135      140
Pro Asp Lys Pro Glu Arg His Cys Ser Leu Phe Val Asp Leu Gly Ser
      145      150      155      160
Ser Glu Leu Arg Lys Asp Ile Tyr Ile Thr Val His Ile Ile Arg Ile
      165      170      175
Gly Arg Met Gly Ala Gly Glu Lys Lys Asn Ala Cys Ser Val Gln Tyr
      180      185      190
Arg Arg Pro Phe Gly Cys Ala Val Leu Ser Ile Ala Asp Leu Leu Thr
      195      200      205
Gly Glu Thr Lys Asp Asp Leu Ile Leu Lys Val Tyr Met Cys Asn Thr
      210      215      220
Glu Ser Glu Trp Tyr Gln Ile His Glu Asn Ile Ile Lys Lys Leu Asn
      225      230      235      240
Ala Arg Tyr Asn Leu Thr Gly Ser Asn Ala Gly Leu Ala Val Ser Leu
      245      250      255
Gln Leu Leu His Gly Asp Ile Glu Gln Ile Arg Arg Glu Tyr Ser Ser
      260      265      270
Val Phe Ser His Gly Val Ser Ile Thr Arg Lys Leu Gly Phe Ser Asn
      275      280      285
Ile Ile Met Pro Gly Glu Met Arg Asn Asp Leu Tyr Ile Thr Ile Glu
      290      295      300
Arg Gly Glu Phe Glu Lys Gly Gly Lys Ser Val Ala Arg Asn Val Glu
      305      310      315      320
Val Thr Met Phe Ile Val Asp Ser Ser Gly Gln Thr Leu Lys Asp Phe
      325      330      335
Ile Ser Phe Gly Ser Gly Glu Pro Pro Ala Ser Glu Tyr His Ser Phe
      340      345      350
Val Leu Tyr His Asn Asn Ser Pro Arg Trp Ser Glu Leu Leu Lys Leu
      355      360      365
Pro Ile Pro Val Asp Lys Phe Arg Gly Ala His Ile Arg Phe Glu Phe
      370      375      380
Arg His Cys Ser Thr Lys Glu Lys Gly Glu Lys Lys Leu Phe Gly Phe
      385      390      395      400
Ser Phe Val Pro Leu Met Gln Glu Asp Gly Arg Thr Leu Pro Asp Gly
      405      410      415
Thr His Glu Leu Ile Val His Lys Cys Glu Glu Asn Thr Asn Leu Gln
      420      425      430
Asp Thr Thr Arg Tyr Leu Lys Leu Pro Phe Ser Lys Gly Ile Phe Leu
      435      440      445
Gly Asn Asn Asn Gln Ala Met Lys Ala Thr Lys Glu Ser Phe Cys Ile
      450      455      460
Thr Ser Phe Leu Cys Ser Thr Lys Leu Thr Gln Asn Gly Asp Met Leu

```

gacaagatca ctggctgtct ctctaaatta aaagaaattg atggctcaga gatagtaaag
 2040
 tttctgcagg atacactgga taccttattt ggaatttttag atgaaaattc ccaaaaatat
 2100
 gggctctaaag tggttgattc tttggttcac ataataaatt tgctgcaaga tagcaaattt
 2160
 catcatttta aacctgtaat ggacacttac attgagagtc attttgctgg ggcacttgca
 2220
 tacagagatc tcatcaaagt gctcaaattg tacgtggacc ggatcacaga agcagagcgg
 2280
 caagagcata tccaggaggt gctgaaggca caagaatata tttttaagta tatagttcaa
 2340
 tctcgaaggc tggtttccct tgccactggg gggcaaaacg aagaggagtt ccgctgctgc
 2400
 attcaggagc ttctcatgtc agtccgtttc tttctttcgc aagagagcaa agggctctgga
 2460
 gcattatctc agtcacaggc tgtgtttctg agctctttcc ctgccgtgta ctcagaactg
 2520
 ttgaagctct ttgatgtccg ggaagtagcc aacttgggtcc aggacaccct gggcagtctg
 2580
 ccgaccatcc tgcattgtga tgattccctg caggccatca aactgcagtg cattggcaaa
 2640
 accgtggaaa gccagcttta taccaaccga gattcccgat acattcttct gctgtcgtg
 2700
 ttacatcacc tccacattca cttgcaagaa cagaaggacc tgatcatgtg tgcacgtatc
 2760
 cttagcaacg tattttgtct tatcaagaaa aatagctcag aaaaatctgt gctggaggaa
 2820
 atagatgtga tagtggccag cttgctggat attctgctga ggaccatatt ggagatcacc
 2880
 agccgacctc agccatccag ctcagcaatg cggttccagt tccaggatgt cactggggag
 2940
 tttgttgctt gtctcctgtc cctattacga caaatgacag atagacatta tcaacagctt
 3000
 cttgatagtt ttaatacaaa ggaagaacta agggtaagtg acattttaaa atgttttctt
 3060
 taacatatct tttgggttta tcttggtttt attcatcact gttgagataa atcctagaca
 3120
 attgctttac ctggtttccat taagttctaa gctgtttttc tcagcctcat ccacagatct
 3180
 gctcatctat attggctttt aaagatttct attactcaag caaagctatt aac
 3233

<210> 5160

<211> 849

<212> PRT

<213> Homo sapiens

<400> 5160

Met	Asn	Glu	Ile	Leu	Asp	Leu	Arg	Arg	Gln	Val	Leu	Val	Gly	His	Leu
1			5					10					15		
Thr	His	Asp	Arg	Met	Lys	Asp	Val	Lys	Arg	His	Ile	Thr	Ala	Arg	Leu
		20					25					30			
Asp	Trp	Gly	Asn	Glu	Gln	Leu	Gly	Leu	Asp	Leu	Val	Pro	Arg	Lys	Glu

agtggcaagc acatagtggg taaccagaat gggcctcttc cctttccttt ttggttacct
420
cacaactcag tataggtact gactgccaaa tctccacatt tgtatatctt ttagcgtaat
480
gaaggcgatc tcttccaccg gctgtggcac atcatgaatg aaatcctgga cctgaggcgg
540
caggtgctgg tgggccacct caccacgac cggatgaagg acgtgaagcg ccacattact
600
gcccggcttg actggggcaa tgaacaactg ggactggacc tgggcctag gaaagagtac
660
gcaatggtgg atccggaaga catcagcatt actgagctct accgattgtc catgctgac
720
atgtttttgt tggggggtgt cattcagatg gaacatcgac atcggaagaa agacaccccg
780
gtgcaggcca gcagtcacca cctctttgtc cagatgaaga gcctcatgtg ttccaacctg
840
ggagaggagc tggaggtcat cttctcactc tttgacagta aagagaaccg gccaatcagt
900
gagagatttt tcttgaggct gaatagaaac gggcttccca aagccctga taaaccggaa
960
cgacattgct ccctctttgt ggatttgggc agcagtgagc taagaaagga catttatatc
1020
accgtgcaca ttatccgaat cggtcgaatg ggagcaggag aaaaaagaa tgcctgtagt
1080
gtccagtacc gacgacctt tggctgtgca gttcttagca tcgctgacct gctaacagga
1140
gagacaaagg atgacctcat tctgaaagta tacatgtgta acacagagag tgagtggtag
1200
caaatccatg agaacatcat caaaaagctg aatgcacgtt ataacttgac tggctccaat
1260
gcaggttttag cagtttctt acagctattg cacggagaca ttgaacaaat cagaagggaa
1320
tattcatcag tattttctca tggagtatcc ataacaagga agctgggatt ttcaaattt
1380
attatgcctg gtgaaatgag gaatgattta tatatcacta ttgaaagggg agaatttgag
1440
aaaggaggga agagcgtggc cagaaatgtg gaagttacga tgttcattgt agacagtagt
1500
ggccaaaccc tgaaggattt tatctccttc ggctctgggg agccaccagc cagtgagtac
1560
cactcctttg tgctttacca taacaacagt ccaggtggg ctgaactgct gaaacttccc
1620
attcctgtgg ataaattccg ggggtgcacac atccgcttcg agtttcggca ttgttcaca
1680
aaggagaaag gagagaagaa gttgtttggg ttttctttt tccctctgat gcaagaagat
1740
ggtaggactc ttccagatgg cactcatgag ctcatcgtgc ataagtgtga agaaaacaca
1800
aatcttcagg atactacccg ctacctcaa cttccctttt ccaagggcat ttctctggg
1860
aataataatc aagccatgaa ggccacaaag gagtctttt gtattacatc ttttctctgt
1920
tccacaaaac tcacacaaaa tggatgatg cttgatctt tgaaatggag aaccaccca
1980

gtccatttct gtgactaagc tgtgcagagg ttgacagcag ggcaagttat attgatattc
 900
 atcctttata ggcttcctgc taaaaagctt ctgagattgt ggtcttccaa aaaaaatagg
 960
 agcttggttg aagtcctcac attttcaagc actcagtgtt ctgcctctgc gaactgtgct
 1020
 aacagctcag tgctgtcctg ggagtcctct gactcagaac cctcgaagca tctgcattg
 1080
 tctttacca ccatcatctt cactaagaga aacatgccta cccatgaagg cgtgtttgat
 1140
 tactccaggc ttctggacac acatacccat ggggtgatttt tgctcctcag gcccaatatt
 1200
 ctcagacagc ccagcagtgt gaacacacaa tgccaggcca gggaaactggg gaccaccatc
 1260
 ttgctgatgg gaagggaaca acaggtggcc cagggacatg ctctgcata
 1310

<210> 5158

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5158

Met	Thr	Ser	His	Met	Val	Arg	Leu	Gly	Ser	Ser	His	Pro	Gln	Ala	Gly
1				5				10					15		
Thr	Ser	Ser	Cys	Leu	Ser	Ser	Asn	Ala	Ser	Arg	Met	Leu	His	Cys	Ser
			20				25					30			
Gln	Glu	Leu	Ala	Ile	Arg	Tyr	Val	Leu	Cys	Gly	Gln	Ser	Ala	Ser	Gln
		35				40					45				
Thr	His	Arg	Cys	Ser	Pro	Ala	Trp	Leu	Ser	Trp	Asp	Leu	Asn	Leu	Leu
	50				55					60					
Val	Lys	Ser	Phe	Ser	Leu	Ser	Glu	Val	Pro	Ser	Leu	Gln	Met	Leu	Asn
65				70					75					80	
Leu	Ala														

<210> 5159

<211> 3233

<212> DNA

<213> Homo sapiens

<400> 5159

nnngatccaa taaagtattg agaccaatgt gcaagaaata taattggaaa gcaatgtctt
 60
 ccatttcac agcttttagt gcatgcagcc atggcacaga gaaggagaa aagaatgtga
 120
 gcaaaagtga tcaggaaga tttcctgatg gaggggggag tccaaccggg gtcttcttgg
 180
 atagtagcat ttgagtagtg tttaaaaaat aaataaataa aaggagcacg tgagaagtaa
 240
 agttgcattt ctggacatga gagcagtgtt gtgaaactta gatgatgcat atagagaagg
 300
 cagcagtggt gtttgaggat agtgagcgaa cagtttgtct gttcacggac atctgtccag
 360

<213> Homo sapiens

<400> 5156

```

Met Asp Leu Ala Gln Met His Ala Cys Gln Gly Pro Gly Asn Asp Leu
 1          5          10          15
Tyr Ile Glu Ala Ser Ala Ala Leu Cys Ala Gly Ser Asp Phe Ser Val
          20          25          30
Ser Gly Gly Leu Gln Trp Val Gln Leu Val Ala His Gly Ser Ala Gly
          35          40          45
Asp Asp Asn Gly Trp Leu Arg Cys His Arg Pro Pro Trp Gln Gly Leu
          50          55          60
Gly Asp Asn Glu Leu Asp Gly Cys Ser Gly Glu Val Asn Val Ser Gln
65          70          75          80
Asp Phe Val Lys Thr Leu Leu Arg Ile Cys Asn Ala Ile Pro Ser Phe
          85          90          95
Arg Gly Leu Leu Glu Ser Cys Met Phe Gly Cys Arg Ala Arg Val Thr
          100          105          110
Arg Asn Phe Trp Thr Leu
          115

```

<210> 5157

<211> 1310

<212> DNA

<213> Homo sapiens

<400> 5157

```

tgatcagaaa ttacctttga cgtgcagtga cagttgattt cctcttgaac tgccggtgaa
60
aacagtctag tacacaggtg ctgtcagccc aggggtgggag caggaaatga ttgctgagcc
120
cggggcaggg gaattgcac tgcaggaaag agatgcagca tgctcctcac tcctgagtgc
180
ccacctgtcc tgcttctctg caggtgaaaa ctctggggga tgctgatcaa tagagcttgg
240
tcccaagctc tactgggccc ttggaggtag caaggccact gggttgctat cctcttgctg
300
gggatagcaa ccaactggtt gcaaccactg ggttgctatc cttttgctat cctcttgctc
360
atgaccagcc atatggtgag gctggggagt tcacatctc aggcaggaac tagcagttgt
420
ttatccagca atgcctcaag gatgttgcac tgctcccagg agctggctat taggtatgtc
480
ttgtgcggtc agtcagcatc acagacacat agatgctcac cagcctggct tagctgggac
540
ctaaatcttc tggtgaaaag cttttcacta agtgagggtc cttccctgca aatgctgaat
600
ctagcctaata tcgcaaccac acagaatttc atggctttca aaggcttgcc atgtgcccc
660
tctcattcta tactcacatc ccatggaggt gaggattttc acttcttttc tctagacttg
720
gaagctgaga ttcagagagg aagcatccct tgtgcaagat cacatagtca ggaggtgaca
780
cagggctaag acttgaacca aggtcttaag aggatttctt cttttcagag tctcttcctt
840

```

<400> 5155

ccaaagtcca gaagttacgc gtcacccttg ctctacagcc aaacatgcag gactctagta
60
acccgcgaaa tgatgggata gcgttgcaaa tccttaaaag agtcttaacg aaatcctggc
120
tgacattgac ttctccactg caaccatcga gttcattgtc tcctaaacct tgccatggag
180
gcctgtggca cctgagccag ccattatcat caccagcact tccatgagct acaagctgga
240
cccactgcag tcctcctgac aactgaaat cagagcctgc acacagagca gcagatgctt
300
caatgtaaag gtcatttcca ggtccttgac aggcgtgcat ctggggccaga tccatggcaa
360
taaccttcag gttgaggcta gagggttca gatgggcagc ttcgaatgac aggagcaagg
420
aacaagaggc cggaaaggga ggggtgacatt ttcagcatct ataagatcaa ctttagaaat
480
atttgggggt tgacaaattc ccatcaagct ctgtggatct tgtacaacta ctcaccaccg
540
gcttctcatc agcacatgat tgggtgcaggg ttctgaggat gattttgaga tgttccctga
600
tgtgtcttg tgaggagatt tcatgacgga tggcaggaaa ctctgtggag agatttctga
660
agacactcct gagctcccaa caccgggcaa ctctcttcca gaggatattg ggggtggagg
720
tagaagagag gcaaagtcag gtttgtcttc ggatcccctt tcattctccc ttttccca
780
cgtaaaccba ctttggctta cagttagaca ccagttttcg gcagatgaaa tccctctgat
840
ttcaggcatt ttgtcaatta agctgctcag caacaatagg ataaacttat gaaaagaaag
900
gagtagcagt cccacagaca aagcatccag cccctgcact gagacagtat agggagaggga
960
cttggctctg gcagacagga cagataatca acatcctagt gggccttaca catgtgggca
1020
tattcttttc cataccttct tgtctgtttt aacaagctaa cccagtcac agtagcagag
1080
agagggtcca tcctaactta gctgaccagg ctggattcct aatcataaaa ccaaaaaagg
1140
aagaacctaa ccatttctct ctttcagcta tgtgttccaa gattactgaa gcaggattct
1200
ggccttcttg ataagaacat gaccagatcc agctggtttg caacaagatg aacttcagt
1260
ctgagctttc accaagtttt tctcactaca atctcattgt aatactaaaa tctccacca
1320
agatggaggt tatctgccat tttctgtact ctgctccgtt gtgctgctag agccacaagc
1380
ctattaaact ttgcctgaaa ta
1402

<210> 5156

<211> 118

<212> PRT

acctctccta ccattcccttc cttctacacc ttctctgcct gtcattaggtg gctgcaggag
 120
 ggggtccacgt tgggagggag aggtgagctg gccttttggtg ctgacacact cctgactttg
 180
 ccctttctcc tgcaggggggt gccattcccg cagaatgagg ctaatgccat ggatgtgggtg
 240
 gtccagtttg ccattccaccg cctgggcttc cagccccagg acatcatcat ctacgcctgg
 300
 tccatcgggc gcttcactgc cacgtgggca gccatgtcct acccagatgt tagtgccatg
 360
 atcctggatg cctcctttga tgacctgggtg cccttgccct tgaaggatcat gccagacagc
 420
 tggagttagt gcagctccca ggcttgccct tcttggaag ggggtgggctg gaactgggaa
 480
 ctgttctgag atggctccct tttcttggtt ggggagtaag tcgccccaat gttggaagca
 540
 ggaggactcc tttgtctggg ggcttcagtt ttctttctcc gtgaatagtg aggaccttta
 600
 tgttgggcaa gggctttgtc tctgccatcc cttcacgcgt
 640

<210> 5154

<211> 162

<212> PRT

<213> Homo sapiens

<400> 5154

Xaa Leu Ala Gly Glu Glu Val Asp Leu Ile Val His Ile Arg Leu
 1 5 10 15
 Leu Glu Arg Thr Thr Ser Pro Thr Ile Pro Ser Phe Tyr Thr Phe Ser
 20 25 30
 Ala Cys His Arg Trp Leu Gln Glu Gly Ser Thr Leu Gly Gly Thr Gly
 35 40 45
 Glu Leu Ala Phe Gly Ala Asp Thr Leu Leu Thr Leu Pro Phe Leu Leu
 50 55 60
 Gln Gly Val Pro Phe Pro Gln Asn Glu Ala Asn Ala Met Asp Val Val
 65 70 75 80
 Val Gln Phe Ala Ile His Arg Leu Gly Phe Gln Pro Gln Asp Ile Ile
 85 90 95
 Ile Tyr Ala Trp Ser Ile Gly Gly Phe Thr Ala Thr Trp Ala Ala Met
 100 105 110
 Ser Tyr Pro Asp Val Ser Ala Met Ile Leu Asp Ala Ser Phe Asp Asp
 115 120 125
 Leu Val Pro Leu Ala Leu Lys Val Met Pro Asp Ser Trp Ser Glu Cys
 130 135 140
 Ser Ser Gln Ala Cys Pro Ser Trp Glu Gly Val Gly Trp Asn Trp Glu
 145 150 155 160
 Leu Phe

<210> 5155

<211> 1402

<212> DNA

<213> Homo sapiens

<213> Homo sapiens

<400> 5152

```

Met Phe Ser Ser Thr Ser Thr Pro Ser Ser Phe Thr Ala Phe Gln Thr
 1           5           10           15
Thr Met Arg Ser Ser Ile Pro His Trp Arg Ile Ser Arg Met Cys Leu
          20           25           30
Lys Pro Thr Phe Thr Lys Gln Gln Ile Ala Asn Leu Asp Lys Gln Ala
        35           40           45
Lys Leu Ser Arg Ala Tyr Asp Gly Thr Thr Tyr Leu Pro Gly Ile Val
       50           55           60
Gly Leu Asn Asn Ile Lys Ala Asn Asp Tyr Ala Asn Ala Val Leu Gln
      65           70           75           80
Ala Leu Ser Asn Val Pro Pro Leu Arg Asn Tyr Phe Leu Glu Glu Asp
          85           90           95
Asn Tyr Lys Asn Ile Lys Arg Pro Pro Gly Asp Ile Met Phe Leu Leu
        100          105          110
Val Gln Arg Phe Gly Glu Leu Met Arg Lys Leu Trp Asn Pro Arg Asn
       115          120          125
Phe Lys Ala His Val Ser Pro His Glu Met Leu Gln Ala Val Val Leu
      130          135          140
Cys Ser Lys Lys Thr Phe Gln Ile Thr Lys Gln Gly Asp Gly Val Asp
     145          150          155          160
Phe Leu Ser Trp Phe Leu Asn Ala Leu His Ser Ala Leu Gly Gly Thr
          165          170          175
Lys Lys Lys Lys Lys Thr Ile Val Thr Asp Val Phe Gln Gly Ser Met
        180          185          190
Arg Ile Phe Thr Lys Lys Leu Pro His Pro Asp Leu Pro Ala Glu Glu
       195          200          205
Lys Glu Gln Leu Leu His Asn Asp Glu Tyr Gln Glu Thr Met Val Glu
      210          215          220
Ser Thr Phe Met Tyr Leu Thr Leu Asp Leu Pro Thr Ala Pro Leu Tyr
     225          230          235          240
Lys Asp Glu Lys Glu Gln Leu Ile Ile Pro Gln Val Pro Leu Phe Asn
          245          250          255
Ile Leu Ala Lys Phe Asn Gly Ile Thr Glu Lys Glu Tyr Lys Thr Tyr
        260          265          270
Lys Glu Asn Phe Leu Lys Arg Phe Gln Leu Thr Lys Leu Pro Pro Tyr
       275          280          285
Leu Ile Phe Cys Ile Lys Ile Phe Thr Lys Asn Asn Phe Phe Val Glu
      290          295          300
Lys Asn Pro Thr Ser Cys Gln Phe Pro Tyr Tyr Lys Cys Gly Ser Glu
     305          310          315          320
Arg Ile Leu Val

```

<210> 5153

<211> 640

<212> DNA

<213> Homo sapiens

<400> 5153

```

nngctagcag gagaggagga ggtagatctc attgtacaca tccgtcttct ggagagaaca
60

```

cggaactact ttctggaaga agacaattat aagaacatca aacgtcctcc aggggatatc
840
atgttcttgt tgggtccagcg ttttggagag ctgatgagaa agctctggaa ccctcgaaat
900
ttcaaggcac atgtgtctcc ccatgagatg cttcaggcag ttgtactttg cagtaagaag
960
acttttcaga tcaccaaaca aggagatggc gttgactttc tgtcttggtt tctgaatgct
1020
ctgcactcag ctctgggggg cacaagaag aaaaagaaga ctattgtgac tgatgttttc
1080
caggggtcca tgaggatctt cactaaaaag cttcccatc ctgatctgcc agcagaagaa
1140
aaagagcagt tgctccataa tgacgagtac caggagacaa tgggtggagtc cacttttatg
1200
tacctgacgc tggaccttcc tactgcccc ctctacaagg acgagaagga gcagctcatc
1260
attccccaag tgccactctt caacatcctg gctaagtcca atggcatcac tgagaaggaa
1320
tataagactt acaaggagaa ctttctgaag cgcttcagc ttaccaagtt gcctccatat
1380
ctaacttttt gtatcaagat attcactaag aacaacttct ttgttgagaa gaatccaact
1440
agttgtcaat ttcctatta caaatgtgga tctgagagaa tacttgtctg aagaagtaca
1500
agcagtacac aagaatacca cctatgacct cattgccaac atcgtgcatg acggcaagcc
1560
ctccgagggc tcctaccgga tccacgtgct tcatcatggg acaggcaaat ggtatgaatt
1620
acaagacctc caggtgactg acatccttcc ccagatgac acactgtcag aggcttacat
1680
tcagatttgg aagaggcgag ataatgatga aaccaaccag cagggggctt gaaggaggcg
1740
tctagggctt tgctccaag ggctgtggct gatgatggta aataagaaca cagaagctgt
1800
agctgaacac aggctggctg gtgggcttcc taggccagcc cagcttgat gggttctggc
1860
tacaccagag caccaagagc ccacttgctt gggatggccc cacactgtca ctgagttgtt
1920
ctttgatcat tttttctag attgatgctc ctttctcca tgcattgagc tcccatctag
1980
cttcagcagg gcagaaccct tctccagatg tgtgtaactt atgtcttgag tatctgggag
2040
tagttgaaga acagataatt cttccaaac atcaagcctt gggattcttg gagcaagcag
2100
aaagccagta acttcgctct gttagagggtg gaggattttc ctatgggttc cccattttc
2160
tgatttgtat ttttagatgg attaaatagt ctctgtttt taiaaaaaaa aiaiaaaaaa
2220
aaaaaaaaa aiaiaaaaaa aiaiaaaaaa aiaiaaaaaa aiaiaaaaaa aia
2273

<210> 5152

<211> 324

<212> PRT

<400> 5150

Xaa Arg Met Ala Val Met Ala Met Gly Ile Lys Asp Asp Arg Leu Asn
 1 5 10 15
 Lys Asp Arg Cys Val Arg Leu Ala Leu Val His Asp Met Ala Glu Cys
 20 25 30
 Ile Val Gly Asp Ile Ala Pro Ala Asp Asn Ile Pro Lys Glu Glu Lys
 35 40 45
 His Arg Arg Glu Glu Glu Ala Met Lys Gln Ile Thr Gln Leu Leu Pro
 50 55 60
 Glu Asp Leu Arg Lys Glu Leu Tyr Glu Leu Trp Glu Glu Tyr Glu Thr
 65 70 75 80
 Gln Ser Ser Ala Glu Ala Lys Phe Val Lys Gln Leu Asp Gln Cys Glu
 85 90 95
 Met Ile Leu Gln Ala Ser Glu Tyr Glu Asp Leu Glu His Lys Pro Gly
 100 105 110
 Arg Leu Gln Asp Phe Tyr Asp Ser Thr Ala Gly Lys Phe Asn His Pro
 115 120 125
 Glu Ile Val Gln Leu Val Ser Glu Leu Glu Ala Glu Arg Ser Thr Asn
 130 135 140
 Ile Ala Ala Ala Ala Ser Glu Pro His Ser
 145 150

<210> 5151

<211> 2273

<212> DNA

<213> Homo sapiens

<400> 5151

nggtagtggg agatgtccgg ccggtctaag cgggagtctc gcggttccac tcgcgggaag
 60
 cgagagtctg agtcgcgggg cagctccggt cgcgtcaagc gggagcgaga tcgggagcgg
 120
 gagcctgagg cggcgagctc ccggggcagc cctgtgcgcg tgaagcggga gttcagagcg
 180
 gcgagcgcgc gcgaggcccc ggcttctgtt gtcccgtttg tgcgggtgaa gcgggagcgc
 240
 gaggtcgatg aggactcgga gcctgagcgg gaggtgcgag caaagaatgg ccgagtggat
 300
 tctgaggacc ggaggagccg ccactgcctg tacctggaca ccattaacag gagtgtgctg
 360
 gactttgact ttgagaaact gtgttctatc tccctctcac acatcaatgc ttatgectgt
 420
 ctggtgtgtg gcaagtactt tcaagctttt cacccttccc tacaggccgg gggttgaagt
 480
 ctcacgccta cattcacagt gtccagttaa gccaccatgt tttcctcaac ctccacaccc
 540
 tcaagtttta ctgccttcca gacaactatg agatcatcga ttcctcattg gaggatatca
 600
 cgtatgtgtt tgaagcccac tttcacaaag cagcaaattg caaacttga caagcaagcc
 660
 aaattgtccc gggcatatga tggtaaccact tacctgccgg gtattgtggg actgaataac
 720
 ataaaggcca atgattatgc caacgctgtc cttcaggctc tatctaattg tcctctctc
 780

	115		120		125
Val	Glu Tyr Ile Asp Arg	Pro Arg Cys Cys Leu	Arg Gly Lys Glu Cys		
	130		135		140
Cys	Ile Asn Arg Phe Gln Gln Val	Glu Ser Arg Trp	Gly Tyr Ser Gly		
145		150		155	160
Thr	Ser Asp Arg Ile Arg Phe Thr	Val Asn Arg Arg	Ile Ser Ile Val		
	165		170		175
Gly	Phe Gly Leu Tyr Gly Ser Ile	His Gly Pro Thr	Asp Tyr Gln Val		
	180		185		190
Asn	Ile Gln Ile Ile Glu Tyr Glu	Lys Lys Gln Thr	Leu Gly Gln Asn		
	195		200		205
Asp	Thr Gly Phe Ser Cys Asp	Gly Thr Ala Asn Thr	Phe Arg Val Met		
	210		215		220
Phe	Lys Glu Pro Ile Glu Ile Leu	Pro Asn Val Cys Tyr Thr	Ala Cys		
225		230		235	240
Ala	Thr Leu Lys Gly Pro Asp Ser	His Tyr Gly Thr Lys Gly	Leu Lys		
	245		250		255
Lys	Val Val His Glu Thr Pro Ala	Ala Ser Lys Thr Val Phe Phe			
	260		265		270
Phe	Ser Ser Pro Gly Asn Asn Asn	Gly Thr Ser Ile Glu Asp Gly Gln			
	275		280		285
Ile	Pro Glu Ile Ile Phe Tyr Thr				
	290		295		

<210> 5149

<211> 533

<212> DNA

<213> Homo sapiens

<400> 5149

```

ntccggatgg cagttatggc tatggggatc aaagatgacc gtcttaacaa agaccgatgt
60
gtacgcctag ccctggttca tgatatggca gaatgcatcg ttggggacat agcaccagca
120
gataacatcc ccaaagaaga aaaacatagg cgagaagagg aagctatgaa gcagataacc
180
cagctcctac cagaggacct cagaaaggag ctctatgaac tttgggaaga gtacgagacc
240
caatctagtg cagaagccaa atttgtgaag cagctagacc aatgtgaaat gattcttcaa
300
gcatctgaat atgaagacct tgaacacaaa cctggggagac tgcaagactt ctatgattcc
360
acagcaggaa aattcaatca ccctgagata gtccagcttg tttctgaact tgaggcagaa
420
agaagcacta acatagctgc agctgccagt gagccacact cctgagacac tctctaaatt
480
gctgcactcc tgtaacaaac attattttcc atttcattgt attgtgtttt gca
533

```

<210> 5150

<211> 154

<212> PRT

<213> Homo sapiens

gtgtggggga cactgctgat gattcccaag attgagatga tgacgggtgat gacgactggg
 2100
 tgaacagcca tcacttcaac attgtgataa tccttcacag cagaaaccga ataaaaatact
 2160
 aacatttcta acaactgctc tgacattgta aagagatcca acagaatcac tctgctgaa
 2220
 aaatacgctt tctgccacct acacatttct atttaggaag taaaatttgc ttcattggtca
 2280
 tgacccatt agtcagtgtt acagctgtgt tggggatagg aagtatatct ggcagattga
 2340
 tatttataca cttttttata aagcagattt taaaatatag taacatccat ttttttcct
 2400
 tgaaagtgat tctcttataa aaaatgaaag tggagtttaa ggtatatcaa atcgttgtgg
 2460
 aaggtgatta aaaatcaaaa ttcttttaaa tatcaactta attttttcta agtaagatac
 2520
 aaaaaatttt catctaaagt aatatttcac tttatatgtt aaagaaggta ggtatatagg
 2580
 tggctgaggt ctcttgaaat tgctaaaggg aaatttttct atggtaatgc tcttacggat
 2640
 ataaacctca gttaaatgga attatctatg ggatgtgtgg ttctgggttaa ctaaaaatta
 2700
 accagtaaac actctgtagt aaccattaca gaaaatactt ctgccttaaa aaatatgata
 2760
 tgccagagat gagttagtgt ttcttgacgt tggagacctt ttaaatgcct catctgttgt
 2820
 actgaacaat tgaaactgca tgcagccata aaagggacaa gaaacagaac tgtttactaa
 2880
 ctttgggaca tcccctggag tttttaaaaa taaataaata tatatatata taaaaaaaaa
 2940
 aaa
 2943

<210> 5148

<211> 296

<212> PRT

<213> Homo sapiens

<400> 5148

Ala	Arg	Leu	Phe	Asp	Glu	Pro	Gln	Leu	Ala	Ser	Leu	Cys	Leu	Asp	Thr
1				5					10					15	
Ile	Asp	Lys	Ser	Thr	Met	Asp	Ala	Ile	Ser	Ala	Glu	Gly	Phe	Thr	Asp
		20						25					30		
Ile	Asp	Ile	Asp	Thr	Leu	Cys	Ala	Val	Leu	Glu	Arg	Asp	Thr	Leu	Ser
		35					40					45			
Ile	Arg	Glu	Ser	Arg	Leu	Phe	Gly	Ala	Val	Val	Arg	Trp	Ala	Glu	Ala
	50					55				60					
Glu	Cys	Gln	Arg	Gln	Gln	Leu	Pro	Val	Thr	Phe	Gly	Asn	Lys	Gln	Lys
65				70						75				80	
Val	Leu	Gly	Lys	Ala	Leu	Ser	Leu	Ile	Arg	Phe	Pro	Leu	Met	Thr	Ile
			85					90						95	
Glu	Glu	Phe	Ala	Ala	Gly	Pro	Ala	Gln	Ser	Gly	Ile	Leu	Ser	Asp	Arg
			100					105						110	
Glu	Val	Val	Asn	Leu	Phe	Leu	His	Phe	Thr	Val	Asn	Pro	Lys	Pro	Arg

gaacctcagc ttgctagtct ttgtctagat acaatagaca aaagcacaat ggatgcaata
480
agtgcagaag ggtttactga tattgatata gatacactct gtgcagtttt agagagagac
540
acactcagta ttcgagaaag tcgacttttt ggagctgttg tacgctgggc agaagcagaa
600
tgtcagagac aacaattacc tgtgactttt gggaataaac aaaaagttct aggaaaagca
660
ctttccttaa tccggttccc actgatgaca attgaggaat ttgcagcagg tcttgctcaa
720
tctggaattt tgtcagatcg tgaagtggta aacctcttct ttcattttac tgtcaaccct
780
aaaccccgag ttgaatacat tgaccgacca agatgctgtc tcaggggaaa ggaatgctgc
840
atcaatagat tccagcaagt agaaagccgc tgggggttaca gtgggacgag tgatcgaatc
900
agattcacag ttaatagaag gatctctata gttggatttg gcttgatgg atctattcat
960
ggccctacag attatcaagt gaatatacag atcattgaat atgagaaaaa gcaaaccttg
1020
ggacagaatg ataccggctt tagttgtgat gggacagcta acacattcag ggtcatgttc
1080
aaggaacca tagagatcct gcccaatgtg tgctacacag catgtgcaac actcaaaggt
1140
ccagattccc actatggcac aaaaggattg aagaaagtag tgcagagac acctgctgca
1200
agcaagactg ttttttctt ttttagttcc cctggcaata ataatggcac ttcaatagaa
1260
gatggacaaa ttccagaaat catattttat acataattta gcattataat acatcttggc
1320
taataatac catacaatct agtgtcaaaa acataaatgg ccacaaaaaa gtagtttgag
1380
tgttatgaat atttaaaatt gtaagataag aaacagtttc ttagagcaga tagaaaaatg
1440
cttatttaaa tctttgcatg atttaaaaaac agattttcca ttttcttaca actttaagag
1500
aaaagaactg ggtttaatgg tttaaaaaaa agcacagctt tttcaccttc atcttgata
1560
atttcataga ttggctgact tagggctctt caatagtttg ggaattgaaa gattcttgtt
1620
atatatagct agtttgggtt tgtttttgtt ttaactatct tgaaggttag gtgagatggg
1680
caaataggct taactatctt gaaggttgga tgaaaagaga tgggtcagta ttcctacaga
1740
attcttatta actcaaataa ctaaatttca gaaaattaag aagctgactt tatatttggt
1800
ggtttgaagt atcttggtgt tagcatttgt aataatgcta aaaaaggcct aataaaatgc
1860
ccaagaaaat attcagtgc tttatagaga aggatatttt gtagtagtat agtaatgtgt
1920
tatgtagtac agttttaaag ctataaatgg aattttgtgt aaattcacia aaatgtgata
1980
taaacaggat ctaagactgg attccctgtc actaaactgc accactatac ctgtctctct
2040

50 55 60
 Leu Gly Lys Val Ser Pro Cys Ala Cys Thr Arg Arg Gln Thr Glu Lys
 65 70 75 80
 Ala Ala Gly Gly Leu Cys Cys Ser Ala Arg Gly Ser Ala Leu Pro Pro
 85 90 95
 Ser Phe Leu Leu Leu Ile Ala Pro Val Cys Gly Ala Tyr Thr Pro Thr
 100 105 110
 Ser Cys Asn Lys Ile Val Ala Ser Ala Lys Lys Pro Gly Ile Arg Thr
 115 120 125
 Gly Ile Gln Gly Leu Lys Gly Asp Gln Gly Glu Pro Gly Pro Ser Gly
 130 135 140
 Asn Pro Gly Lys Val Gly Tyr Pro Gly Pro Ser Gly Pro Leu Gly Ala
 145 150 155 160
 Arg Gly Ile Pro Gly Ile Lys Gly Thr Lys Gly Ser Pro Gly Asn Ile
 165 170 175
 Lys Asp Gln Pro Arg Pro Ala Phe Ser Ala Ile Arg Arg Asn Pro Pro
 180 185 190
 Met Gly Gly Asn Val Val Ile Phe Asp Thr Val Ile Thr Asn Gln Glu
 195 200 205
 Glu Pro Tyr Gln Asn His Ser Gly Arg Phe Val Cys Thr Val Pro Gly
 210 215 220
 Tyr Tyr Tyr Phe Thr Phe Gln Val Leu Ser Gln Trp Glu Ile Cys Leu
 225 230 235 240
 Ser Ile Val Ser Ser Ser Arg Gly Gln Val Arg Arg Ser Leu Gly Phe
 245 250 255
 Cys Asp Thr Thr Asn Lys Gly Leu Phe Gln Val Val Ser Gly Gly Met
 260 265 270
 Val Leu Gln Leu Gln Gln Gly Asp Gln Val Trp Val Glu Lys Asp Pro
 275 280 285
 Lys Lys Gly His Ile Tyr Gln Gly Ser Glu Ala Asp Ser Val Phe Ser
 290 295 300
 Gly Phe Leu Ile Phe Pro Ser Ala
 305 310

<210> 5147

<211> 2943

<212> DNA

<213> Homo sapiens

<400> 5147

nacgcgtcgc tgaaggagcg cttcgcccttc ctcttcaact cggagctgct gagcgatgtg
 60
 cgcttcgtac tgggcaaggg tcgcggcgcc gccgcgctg ggggcccgcga gcgcaccccc
 120
 gccacccgct tcgtgctggc ggccggcgagc gccgtctttg acgccatgtt caacggcggc
 180
 atggccacca cgtcggccga gatcgagctg ccggacgtgg agcccgagc cttcctggcg
 240
 ctgctgagat ttctatatc agatgaagtt caaattgggtc cagaaacagt tatgaccact
 300
 ctttatactg ccaagaaata cgcagtccca gccttggaag cacactgtgt agaatttctc
 360
 accaaacatc ttagggcaga taatgccttt atgttactta ctcaggctcg attatttgat
 420

ctccatgac cagccacatc tgaaaaggaa agcattctgc tctttccaga tctacgtgt
 780
 gccttggcag ggcacaatga ccttgtcgaa atccacctgt caggacgcct aggggtctgt
 840
 accgggtgg cctgtgccta tcacctctta tgcacacctc ccacccctg tattcccacc
 900
 cctggactgg tggccctgc cttggggaag gtctcccat gtgcctgcac caggagacag
 960
 acagagaagg cagcaggcgg cttttgttgc tcagcaagg gctctgcct cctccttcc
 1020
 ttcttgcttc tcatagcccc ggtgtgcggt gcatacacc ccacctctg caataaaata
 1080
 gtagcatcgg caaaaaaacc tggcatccgg acaggcatcc aaggccttaa aggagaccag
 1140
 ggggaacctg ggccctctgg aaaccccgcc aagggtgggt acccagggcc cagcggcccc
 1200
 ctcggagccc gtggcatccc gggaattaaa ggcaccaagg gcagcccagg aaacatcaag
 1260
 gaccagccga ggccagcctt ctccgccatt cggcggaacc cccaatggg gggcaacgtg
 1320
 gtcattcttc acacggtcat caccaaccag gaagaaccgt accagaacca ctccggccga
 1380
 ttcgtctgca ctgtaccgg ctactactac ttcaccttc aggtgctgtc ccagtgggaa
 1440
 atctgctgt ccactgtctc ctctcaagg ggccaggtec gacgtccct gggcttctgt
 1500
 gacaccacca acaaggggct cttccagggt gtgtcaggg gcattggtgt tcagctgcag
 1560
 cagggtgacc aggtctgggt tgaaaaagac ccaaaaagg gtcacattta ccagggtct
 1620
 gagggcgaca gctcttcag cggcttcctc atcttccat ctgctgagc cagggaagga
 1680
 cccctcccc caccacctc tctggcttcc atgtccgcc tgtaaaatgg gggcgctatt
 1740
 gcttcagctg ctgaaggag ggggctggct ctgagagccc caggactggc tgccccgtga
 1800
 cacatgctct aagaagctg tttcttagac ctcttctgg aataaacatc tgtgtctgtg
 1860
 tctgctgaaa aaaaaaaaaa aaaaa
 1885

<210> 5146

<211> 312

<212> PRT

<213> Homo sapiens

<400> 5146

Pro Ala Thr Ser Glu Lys Glu Ser Ile Leu Leu Phe Pro Asp Leu Arg
 1 5 10 15
 Cys Ala Leu Ala Gly His Asn Asp Leu Val Glu Ile His Leu Ser Gly
 20 25 30
 Arg Leu Gly Val Cys Thr Gly Leu Ala Cys Ala Tyr His Leu Leu Cys
 35 40 45
 Thr Pro Pro Thr Pro Cys Ile Pro Thr Pro Gly Leu Val Ala Pro Ala

35 40 45
 Glu Asp Gln Phe Asp Glu Ile Val Asp Ile Ala Thr Lys Arg Lys
 50 55 60
 Gln Tyr Pro Arg Lys Ile Leu Glu Cys Val Ile Lys Thr Ile Lys Ala
 65 70 75 80
 Lys Gln Glu Ile Leu Lys Gln Tyr His Pro Val Val His Pro Leu Asp
 85 90 95
 Leu Lys Tyr Asp Pro Asp Pro Ala Pro His Met Glu Asn Leu Lys Cys
 100 105 110
 Arg Gly Glu Thr Val Ala Lys Glu Ile Ser Glu Ala Met Lys Ser Leu
 115 120 125
 Pro Ala Leu Ile Glu Gln Gly Glu Gly Phe Ser Gln Val Leu Arg Met
 130 135 140
 Gln Pro Val Ile His Leu Gln Arg Ile His Gln Glu Val Phe Ser Ser
 145 150 155 160
 Cys His Arg Lys Pro Asp Ala Lys Pro Glu Asn Phe Ile Thr Gln Ile
 165 170 175
 Glu Thr Thr Pro Thr Glu Thr Ala Ser Arg Lys Thr Ser Asp Met Val
 180 185 190
 Leu Lys Arg Lys Gln Thr Lys Asp Cys Pro Gln Arg Lys Trp Tyr Pro
 195 200 205
 Leu Arg Pro Lys Lys Ile Asn Leu Asp Thr
 210 215

<210> 5145

<211> 1885

<212> DNA

<213> Homo sapiens

<400> 5145

ncctagcgt cctgacaggt ggatttcgac aagggtcattg tgccctgccca aggcacagcg
 60
 tagatctgga aagagcagaa tgctttcctt ttcagatgtg gctgggtcatg gaaggggacg
 120
 ttgtccaagt tgggctgggt cttggtacac gtgggttcggc ccagctccac gtccaagaag
 180
 tagttcaccc cagctacgat ctgcttgagg gcgcgcacca cctgcagcgc gcggctgtgg
 240
 tacatgtcgt tgctggcttt gttgtactcg ccgacggcct cgcctcggtta tcgcagcggg
 300
 tcctctctat ctagctccag cctctcgcct gcgccccact ccccgcgctc cgcgtcctag
 360
 ccgaccatgg ccggggccct gcgcgccccg ctgctcctgc tggccatcct ggccgtgggc
 420
 ctggccgtga gccccgcggc cggctccagt cccggcaagc cgcgcgcct ggtgggaggg
 480
 cccatggacg ccagcgtgga ggaggagggt gtgcggcgtg cactggactt tgccgtcggc
 540
 gagtacaaca aagccggcaa cgacatgtac cacagccgag cgctgcaggt ggtgcgcgcc
 600
 cgcaagcagg tgacaatgtg ggcagctcat gaagatcgta gctgggggtga actacttctt
 660
 ggacgtggag ctgggcccga ccacgtgtac caagaccag cccaacttgg acaactgccc
 720

atcctggaat gtgtcatcaa aaccataaaa gcaaaacaag aaattctgaa gcagtaccac
 480
 cctgttgtac atccactgga cctaaaatat gaccctgac cagccctca tatggaaaat
 540
 ttgaaatgca gaggggaaac agtagcaaag gagatcagtg aagccatgaa gtccttgct
 600
 gcattaattg aacaaggaga gggattttcc caagttctca ggatgcagcc tgttatccac
 660
 ctccagagga ttcaccaaga agtcttttcc agttgtcata ggaaaccaga tgctaaacct
 720
 gagaacttta taacacagat agaaaccaca ccaacagaga ctgcttccag gaaaacctct
 780
 gacatggtac tgaaaagaaa gcaaaactaaa gactgcccc agagaaaatg gtatccattg
 840
 cggccaaaga aaattaatct tgatacatga gctctttctg tttattttgg gagttgaaaa
 900
 taggcaccat caacatttag attacagcct aattaatacc tagataagac ttcatttgaa
 960
 ataagaaata actcttttac tagtgattca tttatacaga tatagtatct ctgtgcgggg
 1020
 atatgatata atattgtatt tccttactgt tttatctatt gtaaataaaa agcattttta
 1080
 aaagtattga cacaaagccc atcagtgggc attaaaaata ttaaaagtgc agacttttac
 1140
 tgtccttaag tgccatcaac ttcagctcc cttgtagctt ttgtgggatt taacaagtaa
 1200
 caaattctgt tgtgtttccc tggatatacat ctttctagga aaaaaaaaaa aagagagaga
 1260
 gctgtataat gatttttctg ttacatgctg aaaagtaatt atcagttctg cacagcagca
 1320
 gatgcagggt ttttttttaa agatgtagtt tgatttatca aattaatgtg ctgatgataa
 1380
 tactggcttt gactttgtta ctccatgttc agctaattta ggtttgtag attaaacttta
 1440
 ggattttttg ttgtgtaaga caatgataac tattatttgt gcaacattac tctttgaaat
 1500
 aaaaattggc atgtagccaa tgtttcctgc ccacactcac tttttctat agaccattaa
 1560
 cataatttga cttggaacta atggtttctt tttagggttt cttatttatt tctttacaaa
 1620
 tcattccagt tcaaaatata tatcagatta atacactgaa aaaaaa
 1666

<210> 5144

<211> 218

<212> PRT

<213> Homo sapiens

<400> 5144

Leu	Pro	Glu	Glu	Ile	Arg	Glu	Pro	Ala	Leu	Arg	Asp	Ala	Gln	Trp	Thr
1				5					10				15		
Phe	Glu	Ser	Ala	Val	Gln	Glu	Asn	Ile	Ser	Ile	Asn	Gly	Gln	Ala	Trp
			20					25				30			
Gln	Glu	Ala	Ser	Asp	Asn	Cys	Phe	Met	Asp	Ser	Asp	Ile	Lys	Val	Leu

<213> Homo sapiens

<400> 5142

```

Met Ser Glu Arg Val Ser Gly Leu Ala Gly Ser Ile Tyr Arg Glu Phe
 1           5           10           15
Glu Arg Leu Ile His Cys Tyr Asp Glu Glu Val Val Lys Glu Leu Met
 20           25           30
Pro Leu Val Val Asn Val Leu Glu Asn Leu Asp Ser Val Leu Ser Glu
 35           40           45
Asn Gln Glu His Glu Val Glu Leu Glu Leu Leu Arg Glu Asp Asn Glu
 50           55           60
Gln Leu Leu Thr Gln Tyr Glu Arg Glu Lys Ala Leu Arg Arg Gln Ala
 65           70           75           80
Glu Glu Lys Phe Ile Glu Phe Glu Asp Ala Leu Glu Gln Glu Lys Lys
 85           90           95
Glu Leu Gln Ile Gln Val Glu His Tyr Glu Phe Gln Thr Arg Gln Leu
100           105           110
Glu Leu Lys Ala Lys Asn Tyr Ala Asp Gln Ile Ser Arg Leu Glu Glu
115           120           125
Arg Glu Ser Glu Met Lys Lys Glu Tyr Asn Ala Leu His Gln Arg His
130           135           140
Thr Glu Met Ile Gln Thr Tyr Val Glu His Ile Glu Arg Ser Lys Met
145           150           155           160
Gln Gln Val Gly Gly Asn Ser Gln Thr Glu Ser Ser Leu Pro Gly Arg
165           170           175
Ser Arg Lys Glu Arg Pro Thr Ser Leu Asn Val Phe Pro Leu Ala Asp
180           185           190
Gly Thr Val Arg Ala Gln Ile Gly Gly Lys Leu Val Pro Ala Gly Asp
195           200           205
His Trp His Leu Ser Asp Leu Gly Gln Leu Gln Ser Ser Ser Ser Tyr
210           215           220
Gln Val Leu
225

```

<210> 5143

<211> 1666

<212> DNA

<213> Homo sapiens

<400> 5143

```

ncccgccac agttccgacg aaaaatggcg gggtttcctg agttgggtgt ccttgaccct
60
ccatgggaca aggagctcgc ggctggcaca gagagccagg ccttggtctc cgccactccc
120
cgagaagact ttcgggtgcg ctgcacctcg aagcgggctg tgaccgaaat gctacaactg
180
tgcgccgct tcgtgcaaaa gctcggggac gctctgccgg aggagattcg ggagcccgtc
240
ctgcgagatg cgcagtggac ttttgaatca gctgtgcaag agaatatcag cattaatggg
300
caagcatggc aggaagcttc agataattgt tttatggatt ctgacatcaa agtacttgaa
360
gatcagtttg atgaaatcat agtagatata gccacaaaac gtaagcagta tcccagaaag
420

```

355	360	365
Thr Lys Arg Asp Val	Thr Leu Glu Ala Ser Arg	Glu Asn Ser Lys Pro
370	375	380
Arg Ala Ile Leu Lys	Pro Arg Lys Val Cys Val	Gly Gly Lys Arg Arg
385	390	395
Lys Asp Glu Ile Ser	Val Asp Ser Leu Asp Phe	Ser Lys Lys Ile Leu
405	410	415
His Thr Ala Trp His	Pro Val Asp Asn Val Ile	Ala Val Ala Ala Thr
420	425	430
Asn Asn Leu Tyr Ile	Phe Gln Asp Lys Ile Asn	
435	440	

<210> 5141
 <211> 928
 <212> DNA
 <213> Homo sapiens

<400> 5141
 ngcgcgcgcg ccgatagcg agccgcgctg gcggcgcgcg tggccgcgat gatggagatc
 60
 cagatggacg agggcgcgcg cgtggtggtg taccaggacg actactgctc cggctcggtg
 120
 atgtcggagc ggggtgtcggg cctggcgggc tccatctacc gcgagttcga gcgcctcatc
 180
 cactgctacg acgaggaggt ggtcaaggag ctcattgccg tgggtggtgaa cgtgctggag
 240
 aacctagact cgggtgctcag cgagaaccag gagcacgagg tggagctgga gctgctgcgc
 300
 gaggacaacg agcagctgct caccagctac gagcgtgaga aggcgctgcg caggcaggcg
 360
 gaggagaaat tcattgagtt tgaagatgct ctggaacaag agaagaaaga gctgcaaata
 420
 caggtggagc actacgagtt ccagacgcgc cagctggagc tgaaggccaa gaactatgcc
 480
 gatcagattt cccggttgga ggagcgggag tcggagatga agaaggagta caatgccctg
 540
 caccagcggc acacagagat gatacagacc tacgtggagc acattgagag gtccaagatg
 600
 cagcaggtcg gaggaaacag ccagaccgag agcagcctgc cggggcggag caggaaggag
 660
 cgccccacct ccctgaacgt gttccccctg gctgacggca cggtagctgc acagatcggg
 720
 ggcaagctcg tgctcgcggg ggaccactgg cacctgagtg acctcggccca gctgcagtcc
 780
 agctccagct accaggtttt gtagccgtgc cgtggagtga gaggttcctc ccctgttctg
 840
 ggtgttcccc gtttacttgg ggcgggagct tcgtctgcag gcagcccttc acgactctct
 900
 gggccactcg cctctcctt tcacgcgt
 928

<210> 5142
 <211> 227
 <212> PRT

tcaataaaaa caacacacta taaagtgttt ttaaattccaa aaaaaaaaa
1968

<210> 5140

<211> 443

<212> PRT

<213> Homo sapiens

<400> 5140

Met	Glu	Glu	Asp	Ile	Asp	Thr	Arg	Lys	Ile	Asn	Asn	Ser	Phe	Leu	Arg	1	5	10	15
Asp	His	Ser	Tyr	Ala	Thr	Glu	Ala	Asp	Ile	Ile	Ser	Thr	Val	Glu	Phe	20	25	30	
Asn	His	Thr	Gly	Glu	Leu	Leu	Ala	Thr	Gly	Asp	Lys	Gly	Gly	Arg	Val	35	40	45	
Val	Ile	Phe	Gln	Arg	Glu	Gln	Glu	Ser	Lys	Asn	Gln	Val	His	Arg	Arg	50	55	60	
Gly	Glu	Tyr	Asn	Val	Tyr	Ser	Thr	Phe	Gln	Ser	His	Glu	Pro	Glu	Phe	65	70	75	80
Asp	Tyr	Leu	Lys	Ser	Leu	Glu	Ile	Glu	Glu	Lys	Ile	Asn	Lys	Ile	Arg	85	90	95	
Trp	Leu	Pro	Gln	Gln	Asn	Ala	Ala	Tyr	Phe	Leu	Leu	Ser	Thr	Asn	Asp	100	105	110	
Lys	Thr	Val	Lys	Leu	Trp	Lys	Val	Ser	Glu	Arg	Asp	Lys	Arg	Pro	Glu	115	120	125	
Gly	Tyr	Asn	Leu	Lys	Asp	Glu	Glu	Gly	Arg	Leu	Arg	Asp	Pro	Ala	Thr	130	135	140	
Ile	Thr	Thr	Leu	Arg	Val	Pro	Val	Leu	Arg	Pro	Met	Asp	Leu	Met	Val	145	150	155	160
Glu	Ala	Thr	Pro	Arg	Arg	Val	Phe	Ala	Asn	Ala	His	Thr	Tyr	His	Ile	165	170	175	
Asn	Ser	Ile	Ser	Val	Asn	Ser	Asp	Tyr	Glu	Thr	Tyr	Met	Ser	Ala	Asp	180	185	190	
Asp	Leu	Arg	Ile	Asn	Leu	Trp	Asn	Phe	Glu	Ile	Thr	Asn	Gln	Ser	Phe	195	200	205	
Asn	Ile	Val	Asp	Ile	Lys	Pro	Ala	Asn	Met	Glu	Glu	Leu	Thr	Glu	Val	210	215	220	
Ile	Thr	Ala	Ala	Glu	Phe	His	Pro	His	His	Cys	Asn	Thr	Phe	Val	Tyr	225	230	235	240
Ser	Ser	Ser	Lys	Gly	Thr	Ile	Arg	Leu	Cys	Asp	Met	Arg	Ala	Ser	Ala	245	250	255	
Leu	Cys	Asp	Arg	His	Thr	Lys	Phe	Phe	Glu	Glu	Pro	Glu	Asp	Pro	Ser	260	265	270	
Asn	Arg	Ser	Phe	Phe	Ser	Glu	Ile	Ile	Ser	Ser	Ile	Ser	Asp	Val	Lys	275	280	285	
Phe	Ser	His	Ser	Gly	Arg	Tyr	Ile	Met	Thr	Arg	Asp	Tyr	Leu	Thr	Val	290	295	300	
Lys	Val	Trp	Asp	Leu	Asn	Met	Glu	Ser	Arg	Pro	Val	Glu	Thr	His	Gln	305	310	315	320
Val	His	Asp	Tyr	Leu	Arg	Ser	Lys	Leu	Cys	Ser	Leu	Tyr	Glu	Asn	Asp	325	330	335	
Cys	Ile	Phe	Asp	Lys	Phe	Glu	Cys	Val	Trp	Asn	Gly	Ser	Asp	Ser	Val	340	345	350	
Ile	Met	Thr	Gly	Ser	Tyr	Asn	Asn	Phe	Phe	Arg	Met	Phe	Asp	Arg	Asp				

gaaatagaag aaaaaatcaa taaaataaga tggctccccc agcagaatgc agcttacttt
360
cttctgtcta ctaatgataa aactgtgaag ctgtggaaag tcagcgagcg tgataagagg
420
ccagaaggct acaatctgaa agatgaggag ggccggctcc gggatcctgc caccatcaca
480
accctgcggg tgcctgtcct gagacccatg gacctgatgg tggaggccac cccacgaaga
540
gtatttgcca acgcacacac atatcacatc aactccatat ctgtcaacag cgactatgaa
600
acctacatgt ccgctgatga cctgaggatt aacctatgga actttgaaat aaccaatcaa
660
agttttaata ttgtggacat taagccagcc aacatggagg agctcacgga ggtgatcaca
720
gcagccgagt tccaccccca tcattgcaac accttcgtgt acagcagcag caaagggaca
780
atccggctgt gtgacatgag ggcacatgcc ctgtgtgaca ggcacaccaa gttttttgaa
840
gagccggaag atccaagcaa cagatcattt ttctctgaaa ttatctcttc gatttcggat
900
gtgaagtcca gccacagtgg gaggtatatc atgaccagag actacttgac cgtcaaagtc
960
tgggatctca acatggagag caggccggtg gagaccacc aggttcatga ctacctgcgc
1020
agcaagctct gctctctcta tgagaacgac tgcactttg acaagtttga gtgtgtgtgg
1080
aatgggtcag acagtgtcat catgacaggg tcctataaca acttcttcag gatgtttgat
1140
agagacacca agcgtgatgt gacccttgag gcttcgaggg aaaacagcaa gccccgggct
1200
atcctcaaac cccgaaaagt gtgtgtgggg ggcaagcgga gaaaagacga gatcagtgtc
1260
gacagctctg actttagcaa aaagatcctg cacacagcct ggcaccccggt ggacaatgtc
1320
attgccgtgg ctgccaccaa taacttgatc atattccagg acaaaatcaa ctagagacgc
1380
gaacgtgagg accaagtctt gtcttgcata gttaagccgg acatttttct gtcagagaaa
1440
aggcatcatt gtccgtcca ttaagaacag tgacgcacct gctacttccc ttcacagaca
1500
caggagaaaag ccgcctccgc tggaggcccg gtgtggttcc gcctcggcga ggcccgagac
1560
aggcgtgct gctcacgtgg agacgtctc gaagcagagt tgacggacac tgctcccaaa
1620
aggtcattac tcagaataaa tgtatttatt tcagtccgag ccttccttct caatttatag
1680
acaaaaaat taacatccaa gagaaaagtt attgtcagat accgctcttt ctccaacttt
1740
ccctcttct ctgccatcac acttgggcct tcaactgcagc gtggtgtggc caccgtccgt
1800
gtcctctcgg ccttctcctg agtccaggtg gactctgtgg atgtgtggat gtggcccgag
1860
caggctcagg cggccccact caccacagc atccgcccgc accccttcgg gtgtgagcgc
1920

```
<210> 5139
<211> 1968
<212> DNA
<213> Homo sapiens
```

```
<400> 5139
gtctgccggc ttctggttcc cacgcaagta agcctgctgt caatggagga ggacattgat
60
acccgcaaaa tcaacaacag tttcctgctc gaccacagct atgcgaccga agctgacatt
120
atctctacgg tagaattcaa ccacacggga gaattactag cgacagggga caaggggggt
180
cgggttgtaa tatttcaacg agagcaggag agtaaaaatc aggttcacg taggggtgaa
240
tacaatgttt acagcacatt ccagagccat gaacccgagt tcgattacct gaagagttta
300
```

acataggccc tgccttagt cctgtgccct gtttgacttt tggccaggag gcctttttgt
 2100
 gctgctgctg ttgcagggct agctgcatgg cccatatgct cagtggccgc atgtaggcca
 2160
 gtgagcggaa cactcgctgc tggcagtatg cctctggggt ctggaaggcc agacccaggc
 2220
 gctcccacac ggtacggtag cagccttcag ctgtctggaa gccctcccaa gtcaggccct
 2280
 cttggatcat ggtagctgcc agcccgtaga ccacaccac ccagacttca tcagactgca
 2340
 cactggattt atcagggaca ccatggggct gcatccatt cacagccccc atggccctc
 2400
 ctgcaaaggc ctggacgttc agctcaaaga tagtttgag agcacggacc acatgttggg
 2460
 taggaaacac ctcaagtgtc cttctccta ggccacaggc cttcaggaa cactgtccag
 2520
 cacactggtc agacataaca ctacgagact gaggccgaga gctgctgtca tagttgtaat
 2580
 agcggccatt ccacagcagt ctctcatagg cttcttgcc cgggctgagg atagaagaaa
 2640
 acttatcctg gatgtcctgt gcccacaca gagcagccat ctggaccatc acagccacag
 2700
 ctgccagcca cagccctcca cagtaagcac tggggcctgt ggtcaccat ccatcatagg
 2760
 tctggtctgc atagcctcca ttttcaatga gtccatcatg gtccttgtca aacttcattt
 2820
 cagattccat cacagcctgc agcaciaaact tcagggttcag gtccttccaa tcagcagtat
 2880
 catggattaa atatgcattg acgcggagcc atggttcatc atctgtggga gaggagggga
 2940
 cttgggtcac ttgcattggt ggatagggta gagggtgcaa aagttgaggg agggaagctg
 3000
 accttggggg ggacttttac ctgggttccc aatatcatgg gggatgacgt tctcctttt
 3060
 cacaggtgcc atcacccac tcatcangta
 3090

<210> 5138

<211> 371

<212> PRT

<213> Homo sapiens

<400> 5138

Met	Glu	Leu	Glu	Leu	Asp	Ala	Gly	Asp	Gln	Asp	Leu	Leu	Ala	Phe	Leu
1				5				10					15		
Leu	Glu	Glu	Ser	Gly	Asp	Leu	Gly	Thr	Ala	Pro	Asp	Glu	Ala	Val	Arg
			20					25					30		
Ala	Pro	Leu	Asp	Trp	Ala	Leu	Pro	Leu	Ser	Glu	Val	Pro	Ser	Asp	Trp
			35				40					45			
Glu	Val	Asp	Asp	Leu	Leu	Cys	Ser	Leu	Leu	Ser	Pro	Pro	Ala	Ser	Leu
			50			55					60				
Asn	Ile	Leu	Ser	Ser	Ser	Asn	Pro	Cys	Leu	Val	His	His	Asp	His	Thr
65				70					75					80	
Tyr	Ser	Leu	Pro	Arg	Glu	Thr	Val	Ser	Met	Asp	Leu	Glu	Ser	Glu	Ser

ccctttccgt agttgtccca aatggagctg gaattggatg ctggtgacca agacctgctg
480
gccttcctgc tagaggaaag tggagatttg gggacggcac ccgatgaggc cgtgagggcc
540
ccactggact gggcgctgcc gctttctgag gtaccgagcg actgggaagt agatgatttg
600
ctgtgctccc tgetgagtcc cccagcgctg ttgaacattc tcagctcttc caacccctgc
660
cttgtccacc atgaccacac ctactccctc ccacgggaaa ctgtctctat ggatctagag
720
agtgagagct gtagaaaaga ggggacccag atgactccac agcatatgga ggagctggca
780
gagcaggaga ttgctaggct agtactgaca gatgaggaga agagtctatt ggagaaggag
840
gggcttattc tgccctgagac acttcctctc actaagacag aggaacaaat tctgaaacgt
900
gtgcgaggga agattcgaaa taaaagatct gctcaagaga gccgcaggaa aaagaaggtg
960
tatgttgggg gtttagagag cagggctctg aaatacacag cccagaatat ggagcttcag
1020
aacaagtac agcttctgga ggaacagaat ttgtcccttc tagatcaact gaggaaactc
1080
caggccatgg tgattgagat atcaaacaaa accagcagca gcagcacctg catcttggtc
1140
ctactagtct ccttctgcct cctccttgta cctgctatgt actcctctga cacaaggggg
1200
agcctgccag ctgagcatgg agtgtgtgcc cgccagcttc gtgccctccc cagtgaggac
1260
ccttaccagc tggagctgcc tgccctgcag tcagaagtgc cgaaagacag cacacaccag
1320
tggttggacg gctcagactg tgtactccag gccctggca acacttctg cctgctgcat
1380
tacatgcctc aggtctccag tgcagagcct cccctggagt ggccattccc tgacctcttc
1440
tcagagcctc tctgccgagg tcccatcctc cccctgcagg caaatctcac aaggaagggg
1500
ggatggcttc ctactggtag cccctctgtc attttgcagg acagatactc aggctagata
1560
tgaggatatg tggggggtct cagcaggagc ctggggggct ccccatctgt gtccaaataa
1620
aaagcgggtg gcaagggctg gccgcagctc ctgtgccctg tcaggacgac tgagggctca
1680
aacacaccac acttaatggc tttctgggtc ttttatttgt acccatgtgt ctgtcacacc
1740
atgaatgtac ctggggaaat caactgacct ccctgaacat ttcacgcagt cagggaaacg
1800
gtgaggaaag aaataaataa gtgattctaa tgctgcctag gtcaccctca acccccattt
1860
actggcacaa ttgggtggag agaaggggaag gggatatgatt gtccctgatgg ctcaggggtg
1920
caggaggttc agaggggaag gaggaaaggc caggctggag gctgggctgt tagcacttcc
1980
ctcccacagt tcagacggct cactctgggc tcaggtttgc catggcttcc tttgggtcca
2040

85 90 95
 His Trp Glu Glu Asp Ala Ser Trp Gly Pro His Arg Leu Ala Val Leu
 100 105 110
 Val Pro Phe Arg Glu Arg Phe Glu Glu Leu Leu Val Phe Val Pro His
 115 120 125
 Met Arg Arg Phe Leu Ser Arg Lys Lys Ile Arg His His Ile Tyr Val
 130 135 140
 Leu Asn Gln Val Asp His Phe Arg Phe Asn Arg Ala Ala Leu Ile Asn
 145 150 155 160
 Val Gly Phe Leu Glu Ser Ser Asn Ser Thr Asp Tyr Ile Ala Met His
 165 170 175
 Asp Val Asp Leu Leu Pro Leu Asn Glu Glu Leu Asp Tyr Gly Phe Pro
 180 185 190
 Glu Ala Gly Pro Phe His Val Ala Ser Pro Glu Leu His Pro Leu Tyr
 195 200 205
 His Tyr Lys Thr Tyr Val Gly Gly Ile Leu Leu Leu Ser Lys Gln His
 210 215 220
 Tyr Arg Leu Cys Asn Gly Met Ser Asn Arg Phe Trp Gly Trp Gly Arg
 225 230 235 240
 Glu Asp Asp Glu Phe Tyr Arg Arg Ile Lys Gly Ala Gly Leu Gln Leu
 245 250 255
 Phe Arg Pro Ser Gly Ile Thr Thr Gly Tyr Lys Thr Phe Arg His Leu
 260 265 270
 His Asp Pro Ala Trp Arg Lys Arg Asp Gln Lys Arg Ile Ala Ala Gln
 275 280 285
 Lys Gln Glu Gln Phe Lys Val Asp Arg Glu Gly Gly Leu Asn Thr Val
 290 295 300
 Lys Tyr His Val Ala Ser Arg Thr Ala Leu Ser Val Gly Gly Ala Pro
 305 310 315 320
 Cys Thr Val Leu Asn Ile Met Leu Asp Cys Asp Lys Thr Ala Thr Pro
 325 330 335
 Trp Cys Thr Phe Ser
 340

<210> 5137

<211> 3090

<212> DNA

<213> Homo sapiens

<400> 5137

nngcggcgca atccggagag gacgccagga cgacgcccga gttccctttc aggctagaac
 60
 tcttcctttt tctagcttgg ggtagaaggc ggcgggangc cccggaaccc ccgccctcgg
 120
 ggtgcgaggc ggcanagggc cgtcccctac atttgcatag cccctgggac gtggcgctgc
 180
 acccaagcct cttctcagtt ggagggaact ccaagtccca cagtgccacg ggggtggggtg
 240
 cgtcactttc gctgcgttgg aggctgagga gaattgagcc tgggaggcgg gtccggagag
 300
 ggctatggaa agccgccggc ggggaatccc ggccgtagag ggacagtgga taggtgcccc
 360
 aggcctacag ctggcctggg gctcgtgtct gggcttcgga cgttggggcc cggtggccca
 420

tccaagcagc actaccggct gtgcaatggg atgtccaacc gcttctgggg ctggggccgc
 720
 gaggacgacg agttctaccg gcgcattaag ggagctgggc tccagctttt ccgcccctcg
 780
 ggaatcaciaa ctgggtacaa gacatttcgc cacctgcacg acccagcctg gcggaagagg
 840
 gaccagaagc gcatcgcagc tcaaaaacag gagcagttca aggtggacag ggagggaggc
 900
 ctgaacactg tgaagtacca tgtggcttcc cgcactgccc tgtctgtggg cggggccccc
 960
 tgcactgtcc tcaacatcat gttggactgt gacaagaccg ccacaccctg gtgcacattc
 1020
 agctgagctg gatggacagt gaggaagcct gtacctacag gccatattgc tcaggctcag
 1080
 gacaaggcct caggctcgtg gccagctct gacaggatgt ggagtggcca ggaccaagac
 1140
 agcaagctac gcaattgcag ccaccggcc gccaaaggcag gcttgggctg ggccaggaca
 1200
 cgtggggtgc ctgggacgct gcttgccatg cacagtgatc agagagaggc tggggtgtgt
 1260
 cctgtccggg accccccctg ccttcctgct caccctactc tgacctcctt cacgtgccca
 1320
 ggctgtggg tagtggggag ggctgaacag gacaacctct catcaccccc acttttgttc
 1380
 cttcctgctg ggctgcctcg tgcagagaca cagtgtaggg gccatgcagc tggcgtaggt
 1440
 ggtagttggg cctggtgagg gttaggactt cagaaaccag agcacaagcc ccacagaggg
 1500
 ggaacagcca gcaccgctct agctggttgt tgccatgccg gaatgtgggc ctagtgttgc
 1560
 cagatcttct gatttttcga aagaaactag aatgctggat tcttaagtga tatcttctga
 1620
 ttttttaa at gatagcacct aaatgaaact ttcaaaaagt atggcaggcc agacaaaaaa
 1680
 aaaaaaaaaa aaaaaa
 1696

<210> 5136

<211> 341

<212> PRT

<213> Homo sapiens

<400> 5136

Xaa	Cys	Glu	Arg	Leu	Pro	His	Ala	Pro	Pro	Pro	Leu	Arg	Thr	Met	Phe
1				5				10						15	
Pro	Ser	Arg	Arg	Lys	Ala	Ala	Gln	Leu	Pro	Trp	Glu	Asp	Gly	Arg	Ser
		20						25				30			
Gly	Leu	Leu	Ser	Gly	Gly	Leu	Pro	Arg	Lys	Cys	Ser	Val	Phe	His	Leu
		35					40					45			
Phe	Val	Ala	Cys	Leu	Ser	Leu	Gly	Phe	Phe	Ser	Leu	Leu	Trp	Leu	Gln
	50					55				60					
Leu	Ser	Cys	Ser	Gly	Asp	Val	Ala	Arg	Ala	Val	Arg	Gly	Gln	Gly	Gln
65				70				75					80		
Glu	Thr	Ser	Gly	Pro	Pro	Arg	Ala	Cys	Pro	Pro	Glu	Pro	Pro	Pro	Glu

<211> 157

<212> PRT

<213> Homo sapiens

<400> 5134

```

Met Asn Arg Phe Asp Arg Pro Asp Arg Asn Val Arg Gln Pro Gln Glu
 1           5           10           15
Gly Phe Trp Lys Arg Pro Pro Gln Arg Trp Ser Gly Gln Glu His Tyr
      20           25           30
His Leu Ser His Pro Asp His Tyr His His His Gly Lys Ser Asp Leu
      35           40           45
Ser Arg Gly Ser Pro Tyr Arg Glu Ser Pro Leu Gly His Phe Glu Ser
      50           55           60
Tyr Gly Gly Met Pro Phe Phe Gln Ala Gln Lys Met Phe Val Asp Val
65           70           75           80
Pro Glu Asn Thr Val Ile Leu Asp Glu Met Thr Leu Arg His Met Val
      85           90           95
Gln Asp Cys Thr Ala Val Lys Thr Gln Leu Leu Lys Leu Lys Arg Leu
      100          105          110
Leu His Gln His Asp Gly Ser Gly Ser Leu His Asp Ile Gln Leu Ser
      115          120          125
Leu Pro Ser Ser Pro Glu Pro Glu Asp Gly Asp Lys Val Tyr Lys Asn
      130          135          140
Glu Asp Leu Leu Asn Glu Ile Lys Gln Leu Lys Asp Glu
145          150          155

```

<210> 5135

<211> 1696

<212> DNA

<213> Homo sapiens

<400> 5135

```

nnctgcgagc gcctgcccc tgcgcgcgcg cctctccgca cgatgttccc ctgcgcgagg
60
aaagcggcgc agctgccctg ggaggacggc aggtccgggt tgctctccgg cggcctccct
120
cggaagtgtt ccgtcttcca cctgttcgtg gcctgcctct cgctgggctt cttctcccta
180
ctctggctgc agctcagctg ctctggggac gtggcccggg cagtcagggg acaagggcag
240
gagacctcgg gccctccccg cgctgcccc ccagagccgc ccctgagca ctgggaagaa
300
gacgcatect ggggccccca ccgctgggca gtgctggtgc cttccgcga acgcttcgag
360
gagctcctgg tcttcgtgcc ccacatgcgc cgcttctga gcaggaagaa gatccggcac
420
cacatctacg tgctcaacca ggtggaccac ttcaggttca accgggcagc gtcacatcaac
480
gtgggcttcc tggagagcag caacagcacg gactacattg ccatgcacga cgttgacctg
540
ctccctctca acgaggagct ggactatggc tttcctgagg ctgggccctt ccacgtggcc
600
tccccggagc tccacctct ctaccactac aagacctatg tcggcggcat cctgctgctc
660

```

```

65          70          75          80
Ala Gly Lys Thr Glu Ala Ser Lys His Ile Met Gln Tyr Ile Ala Ala
      85          90          95
Val Thr Asn Pro Ser Gln Arg Ala Glu Val Glu Arg Val Lys Asp Val
      100          105          110
Leu Leu Lys Ser Thr Cys Val Leu Glu Ala Phe Gly Asn Ala Arg Thr
      115          120          125
Asn Arg Asn His Asn Ser Ser Arg Phe Gly Lys Tyr Met Asp Ile Asn
      130          135          140
Phe Asp Phe Lys Gly Asp Pro Ile Gly Gly His Ile His Ser Tyr Leu
      145          150          155          160
Leu Glu Lys Ser Arg Val Leu Lys Gln His Val Gly Glu Arg Asn Phe
      165          170          175
His Ala Phe Tyr Gln Leu Leu Arg Gly Ser Glu Asp Lys Gln Leu His
      180          185          190
Glu Leu His Leu Glu Arg Asn Pro Ala Val Tyr Asn Phe Thr His Gln
      195          200          205
Gly Ala Gly Leu Asn Met Thr Val His Ser Ala Leu Asp Ser Asp Glu
      210          215          220
Gln Ser His Gln Ala Val Thr Glu Ala Met Arg Val Ile Gly Phe Ser
      225          230          235          240
Pro Glu Glu Val Glu Ser Val His Arg Ile Leu Ala Ala Ile Leu His
      245          250          255
Leu Gly Asn Ile Glu Phe Val
      260

```

<210> 5133

<211> 581

<212> DNA

<213> Homo sapiens

<400> 5133

```

actatgtctg agtaggcagc cggtaacaca atgtctccct tgtgcaaagt aactctctta
60
gtgagtgtctc agatatgtga ggaaaaagta tttggtggag tgtgacaata tgaaccgctt
120
tgaccgacca gacagaaatg ttcggcagcc tcaggaaggt ttttgaaaaa ggccacccca
180
gaggtggagt ggacaggagc attaccacct cagccaccct gaccactatc atcaccatgg
240
aaaaagtgac ttgagcagag gctctcccta tagagaatct cctttgggtc attttgaaag
300
ctatggaggg atgccctttt tccaggtcca gaagatgttt gttgatgtac cagaaaatac
360
agtgatactg gatgagatga cccttcggca catggttcag gattgcactg ctgtaaaaac
420
tcagttactc aaactgaaac gtctcctgca tcagcatgat ggaagtgggt cattgcatga
480
tattcaactg tcattgccat ccagtcgaga accagaagat ggtgataaag tatataagaa
540
tgaagattta ttaaatgaaa taaaacaact taaagacgaa a
581

```

<210> 5134

	85		90		95								
Val	Val	Gln	Ala	Trp	Met	Ser	Arg	Gln	Leu	Gly	Leu	Cys	Pro
	100						105					110	

<210> 5131
 <211> 789
 <212> DNA
 <213> Homo sapiens

<400> 5131
 atgaggaacc tgcagctcag gttcgagaag ggccgcatct acacctacat cggtagggtg
 60
 ctgggtgtccg tgaaccccta ccaggagctg cccctgtatg ggcttgaggc catcgcccag
 120
 taccagggcc gtgagctcta tgagcggcca ccccatctct atgctgtggc caacgccgcc
 180
 tacaaggcaa tgaagcaccg gtccaggac acctgcatcg tcctctcagg ggagagtggg
 240
 gcagggaaga cagaagccag taagcacatc atgcagtaca tcgctgctgt caccaatcca
 300
 agccagaggg ctgaggtgga gagggtaag gacgtgctgc tcaagtccac ctgtgtgctg
 360
 gaggcctttg gcaatgcccg caccaaccgc aatcacact ccagccgctt tggcaagtac
 420
 atggacatca actttgactt caagggggac ccgacgag gacacatcca cagctaccta
 480
 ctggagaagt ctcgggtcct caagcagcac gtgggtgaaa gaaacttcca cgccttctac
 540
 caattgctga gaggcagtga ggacaagcag ctgcatgaac tgcacttgga gagaaacct
 600
 gctgtatata atttcacaca ccaggagca ggactcaaca tgactgtgca cagtgccttg
 660
 gacagtgatg agcagagcca ccaggcagt accgaggcca tgagggtcat cggcttcagt
 720
 cctgaagagg tggagtctgt gcatcgcatc ctggctgcca tattgcacct gggaaacatc
 780
 gagtttgtg
 789

<210> 5132
 <211> 263
 <212> PRT
 <213> Homo sapiens

<400> 5132
 Met Arg Asn Leu Gln Leu Arg Phe Glu Lys Gly Arg Ile Tyr Thr Tyr
 1 5 10 15
 Ile Gly Glu Val Leu Val Ser Val Asn Pro Tyr Gln Glu Leu Pro Leu
 20 25 30
 Tyr Gly Pro Glu Ala Ile Ala Gln Tyr Gln Gly Arg Glu Leu Tyr Glu
 35 40 45
 Arg Pro Pro His Leu Tyr Ala Val Ala Asn Ala Ala Tyr Lys Ala Met
 50 55 60
 Lys His Arg Ser Arg Asp Thr Cys Ile Val Ile Ser Gly Glu Ser Gly

35 40 45
Ala Ser Ser Thr Thr Ile Ser
50 55

<210> 5129
<211> 745
<212> DNA
<213> Homo sapiens

<400> 5129
accggtgaac aggatccccc aggaaatggg gaggaagcct agagagaagg gccagatcgt
60
aggccaagac ccccgctgt gtctctgttc actggcagcg gagcgaggag agaggtgtgg
120
gctgacctga aaccagcacc tcctgtgtcc ccagctgagc cctgcacggg attggccaaa
180
tgtgtgtctc tgcggccgcc ctgctgcccc cccctgggt ggagctgggg tctgggacag
240
tgaagatggc tcccacagct gaggggcact gggtgccaag agcctgccag accctggggc
300
accagaaac atgctctgat agtgcagctg tgagcactgg cctgcgtccc ctccaccag
360
ccgacctatg aggctcaggg tgcttggggg cccatcaagg acatagtctt agctgccgac
420
tcacccaggc agcctgcaca acccctggct cccctccacc ggccacctgc cccctgcac
480
aggcaggatc cggcctcgcc caccacagc cctgcacctc cgggcccacg gcagcaagat
540
tcctatcttg gggatgcttt cctccctttg ccgagagacc ccccccccc acaccttgcc
600
tctcttcaag gagccgaaaa tgcagctgcc gactgatttg ctgtggagct aaaaataact
660
gccgggctcc agccagggcc caggaaaata tccattgct aggagacaac cgttgccggg
720
agaccgccat tgctaggcga cgcgt
745

<210> 5130
<211> 111
<212> PRT
<213> Homo sapiens

<400> 5130
Met Ala Val Ser Arg Gln Arg Leu Ser Pro Ser Asn Gly Ile Phe Ser
1 5 10 15
Trp Ala Leu Ala Gly Ala Arg Gln Leu Phe Leu Ala Pro Gln Gln Ile
20 25 30
Ser Arg Gln Leu His Phe Arg Leu Leu Glu Glu Arg Gln Gly Val Gly
35 40 45
Gly Val Gly Leu Ser Ala Lys Gly Gly Lys His Pro Gln Asp Arg Asn
50 55 60
Leu Ala Ala Val Gly Pro Glu Val Gln Ala Cys Gly Trp Ala Arg Pro
65 70 75 80
Asp Pro Ala Cys Ala Gly Gly Gln Val Ala Gly Gly Gly Glu Pro Gly

<211> 117
 <212> PRT
 <213> Homo sapiens

<400> 5126
 Met Phe Lys Arg Arg Phe Val Gly Val Arg Pro Ile Cys Phe His Cys
 1 5 10 15
 Thr Phe Ser Gly Leu Val Ser Thr Phe Glu Val Val Leu Trp Leu Asn
 20 25 30
 Phe Ser Cys Ser Phe Cys Val Val Phe Arg Gly Gly Ser Pro His Ala
 35 40 45
 Glu Ile Leu Cys Met Gln Pro Thr Gly Lys Arg Pro Pro Gly Ser Gln
 50 55 60
 Asp Phe Ser Phe Ser Cys Leu Cys Pro Ala Thr Cys Ser Leu Pro Leu
 65 70 75 80
 Phe Arg Cys Gln Arg Gly Asp Phe Arg Ala Val Cys Phe Asn Pro Gly
 85 90 95
 Arg Ser Asp Thr Leu Val Ser Phe Phe Gln Glu Thr Ile Ala Phe Thr
 100 105 110
 Asp Val Leu Val Val
 115

<210> 5127
 <211> 400
 <212> DNA
 <213> Homo sapiens

<400> 5127
 ggtaccgcgc caatgcctct cgggaggccc tgcggaccgg ctctgggggtg cgttttcccg
 60
 agttcgtcca gtacctgctg gacgtgcacc ggcccgtagg gatggacatt cactggggacc
 120
 atgtcagccg gctctgcagc ccctgcctca tcgactacga ttctgtaggc aagttcgaga
 180
 gcatggagga cgatgccaac ttcttctctga gcctcatccg cgcgccgagg aacctgacct
 240
 tcccccggtt caaggaccgg cactcgcagg aggcgcggac cacagcgagg atcgcccacc
 300
 agtacttcgc ccaactctcg gccctgcaaa ggcagcgac ctacgacttc tactacatgg
 360
 attacctgat gttcaactat tccaagccct ttgcagatct
 400

<210> 5128
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 5128
 Gly Thr Ala Pro Met Pro Leu Gly Arg Pro Cys Gly Pro Ala Leu Gly
 1 5 10 15
 Cys Val Phe Pro Ser Ser Ser Ser Thr Cys Trp Thr Cys Thr Gly Pro
 20 25 30
 Trp Gly Trp Thr Phe Thr Gly Thr Met Ser Ala Gly Ser Ala Ala Pro

ttcctctagg aattccagac cgaccatcta ccatgactaa caacaatgaa caaagggctt
4800
aggggcaaga gctacctgca aagacgtgtc atggaaccct tcaccatgca atgccttgaa
4860
ctcagctctg gctgctccca agaaaagggtg gctggctggg ggcttgga caagcacaat
4920
ggggctggtg gagccactgt gcagagctac ttgaataatc actgggtttt catcaactcc
4980
ttttgtcata cagaccactc aagggtgtaa gtgttggtaa ccttcatttc ggtgtccaaa
5040
gcctcacagc aggtgagcca ccctgagatg cttgtggcca catggtggcc acagtacagag
5100
ctttgaaagt cagtaccaa tgaacgcata attggacacc aaaaatcaag tgttactttc
5160
atgtttcctc accccatcat ctcatgctc cctgctgact ctgataccga cgctgagctg
5220
acttgccagg ctgccgctgg acgcgtagag atcaggccag cgccgcgctc atttttccag
5280
gtagacctac tctgtggaac ggaagtgcc tagctgcttt gttttttag cacttgctgg
5340
ctgaattttt cttttgctaa tcgctaacca gaaagtctgg ttagaggggg ctcaactcaa
5400
tccctttggt cccagcgcc agacaagagt taattctgga aaattcagta cttgaatgta
5460
cctgccttat tgcataccaa tttactgggg ggaaaaaaaa agttaagaga tgccggctcc
5520
agatctccac ttcattcaca ggtgattttg gaaatcctgt aagttacact tcctgttctg
5580
gttttgttt gtttttgtt tcctttggct gattcctgct gagtgaggcc agttcctcat
5640
caggctcagg gcagggtgct tttcaggcgt ggctccttt ccatctagca cagcatcttt
5700
gtctctgttc tgtctcctcc aaatccaaga tgattttaat tagtacagac atgtacagtc
5760
tacaattaaa gagtgatatt tactaatatg attttgattc ttctcctct ttgctgtcct
5820
ttcaagacac ttgctggaaa aagctttaat gcacttagtt ttcttttagg tttctatga
5880
ctcagatgta aaggactttc tctgtacagt atattatcca atgcatgttt gttctctctc
5940
ctgatattat gaacaccaca cagttgtgaa gccgtgcagt ggggatgcc cacacccac
6000
agaggcatct acccctgtgt ataaggaaag acattttcct ttgctgtact tgcttgagca
6060
gttttattgt ctgtacatgt gagctgtgtg agatagatgt gaaaagttca aatgaatgca
6120
tttctgccc ccatgtatac agattgtcat ctgtacaagg aactgtatgt atgaaagcaa
6180
atgtacttat ttataaatgg ctaacacttg gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
6240
aaaa
6244

<210> 5126

acttcagttt aataggtttc tcaccaagtt gtatgttcca ttggcccagg attcttgcac
3180
taatggggtt ctatcacatc atgtctataa atgggtgcac tttactgttt gaatttgtaa
3240
ctgaagtact ggatatttaa gtgtgagtaa tgtcttcatt agaaaatagc agaaccgctc
3300
ttgtctttta gtgtattttt caagaaaaaa ggaaaggaaa gacatcaagc agtggatcac
3360
aacatttata gcacaagaaa taacttgtat ataagcatca aaaagattaa gaatttttta
3420
atatgaaaaa tatttgcagt gattttaaag tgcttttcca gcaatgttct tagggactcc
3480
tgagacacgg ttactttatc tactggatca gtaaggcaca caattaacaa ttaacaatta
3540
atgtttattt acaaagtaaa gggaaaacct gtgtaacatg agaatttggc atgacaaaaa
3600
ggagaccatt ttgtatctgc tgttgtatct tgtccgggtt gcagacgtgc actattaaag
3660
tcccaagtta atagagcaca aacccttctc gctcctcccc catgtgcccc tctttttaga
3720
tgtgtataac ttaaactcga tggctcagga aaattccact aattagaatc atgtacagta
3780
cccaggtcgt ttgtccagat atacaagttt gctaattgtg ttaagcctgg attattaaac
3840
acttttctta aattattgta aacagaacag cttagagaaa ggtattctca gtccttaata
3900
ttgtatagta gtttatgagc cctctcttaa atattggtat ttttatattc cagagatgta
3960
cccaatagaa aaaattaaaa attaatcagt atctaattta atatccataa gtatttttcc
4020
ttagatttta gtcacgtaca gtgggctatg tggatgtcac ttgtgcttca ccatagttta
4080
ccactagggtg tcaactgtggc tctgcactgc gcttgttttg tagcaaagaa cagcggcatc
4140
ccctcgggag agaggagctg cttccagggc aacaggcaag cgggctcaga ggttcaggag
4200
aaggcaacag aggcctggaa ggggtcttcg tgcactctgt ccagttgtgc aagacgatct
4260
ctttgaacac tacatgcttt ggacttcagc caggcagagg ctggaagaag gttgaccaga
4320
gctcccttgc tctggtagag ggatgggtac atggagaagc cccttcttcc ccatgagcct
4380
ccctcctgtc agttcctctc agcctccagc ttttataact ccagaagcgt cacagttggg
4440
tggtttgatt cagagagagt tatttttcta ctgcagaaat gccttggaac aaaccagtgc
4500
tcaactgaatc ttgcccacaa aatggaatag gctatcccag ggggcaagag gtgcccgc
4560
ctgtgcccag cctcctcttg atgtcccag tgcccagcag cctcgcacac cctgctgtc
4620
tgttctggg ctgcccattt ctcaagaaac cgacctgcaa aggcagccgg ctgctgcctc
4680
cacaccgagg gctgtgcggt cctgctgctc gctcactggg aggtgcagct ctttctctc
4740

cctcttctctg taaaccacaga tggcgctcata cagaaattgt ttctttcaga agcagattgg
1560
aatctcttgg gaccatgaga ctgagtcacca atatttccac ccagggtcat gcccgttgtt
1620
gtctacttcc attttgagat ctatagtttg attatctatt attacaggaa ctgtttcttt
1680
tctttttcta ggagtgttta tgagagtgtg atattttaaa gtcagacgca gcaaaaactg
1740
tttcaggggtg aagaaagacc cctttcagcc ctgttttgca gccctgggtg ggggcatgag
1800
atagacagca agcttctgat cttgaagctt gtctagaaga cacatcttct aggtctctgtg
1860
gtcatttgggt aggctgacct ttgagtgtgaggaggccacta ttgagtggat agcaagaaca
1920
ttggaaccaa agcctcggca caggcctggc actggctgta catcagctct tacaactaaa
1980
caactcaact aagcaactga aacgaaacaa aggagcattc gttctctgtt gttaggaatc
2040
attctgtctt gttaggggaag ggctgcagga agggcagttt cctgaataaa aatctggctg
2100
cgaccagtcc catgtgtctg gtaagtaagt aagtaagtaa gtgccctttg aagggatcat
2160
taagacacag ggagcatgaa cctgagatca gaagcatttc ttactaatt tagattctgc
2220
gaaatagacg gacctctcca ccccaaac taaaacaggc caggacttgt ctctgtgtctg
2280
aaagcaata gcaagactaa ctcaagcccc agcctctttc cacactccct gatacctaag
2340
gactgctttc tcagctagac cagggtgggc atcagcgacg ccttctcagc tagaccaggg
2400
taggcacag cgctctctct ccatctctat acccctctct ctcacatcag gaagatgaaa
2460
tgtgtagctc tagcggcaac ctctagccag gagcccagtg gcctctcaga ttgttttttg
2520
gccaggtctc agcactgtct gcatctttac atcttactcc ttaaaaccgc ctctcgctga
2580
ggagccactg cattttgaag aatttctcag tgtctgtcag gaaagtactc ctgctcattt
2640
ggaacgccac acaccacccg cactcacctg tccaggcgaa tgagcaggtc ctgtagcttt
2700
acaaatatgc cgctgatgcc gcttctcccc agggctctct agttttccag gacaaaaaga
2760
tttagggcct ataccctatg ggcaaaacac ctaaaatgtc aacagtcaaa atgccattct
2820
ttttggccat cataagaggg agtaggtatc actgctgcat gccagttgtt tttgactaga
2880
atatgccaac cagagcttgt tggggcagga gacgtttttc cttacaagca gactgcctgt
2940
gccctgtgcc ctgtttgcta cttcactgcc atggaatgat ccgagtactg tatttcagag
3000
ctgccccttc ccagcagca aacactcgct gagtccatgt ctggcttcag gtgggaggaa
3060
atgtttcaga tgaaacttac tcaattcata ccacctgaa atggaggaca gaggtgacaa
3120

<212> DNA

<213> Homo sapiens

<400> 5125

ngcccacccg atccaggacc acaccattca tggggatcat agataaaaca gcacggactc
60
agcagtaccc ccacctccac cagcagaatc ggacctgggc agtgtcatct gtggacaccg
120
tcctcagtcc cacgtctcca ggcaacctgc ctcagcctga gtccttcagt ccaccatcat
180
ccatcagcaa cattgccttt tataacaaaa ccaacaatgc acagaatggc catttgctgg
240
aggacgatta ttacagcccc catgggatgc tggctaacgg gtctcgtgga gacctcttgg
300
agcgagtcag ccaggcctcc tcctatcccc acgtgaaggt agctcggact ctacctgtgg
360
ctcaggcata ccaggacaac ctgtacaggc agctgtcccc agactctcgg caagggcaga
420
catcccctat caaaccaaag agaccgttcg tggagtctaa tgtttaaaag acgttttgtt
480
ggagtggagc ccatatgttt tcaactgcaca ttttcaggct tggtttccac attcagggta
540
gttctctggc ttaatttctc atgtagtctt tgtgtggtgt tcagagggtg cagcccacat
600
gctgaaatcc tttgcatgca gccgactggg aagcggcctc ccgggagcca ggacttcagt
660
ttctcttgtc tgtgcccagc cacatgctct ctccctctct tcagatgccca acgaggagat
720
tttcgtgctg tgtgctttta cccagggaga tcagacacac tggtcagctt tttccaggag
780
acaatcgctt tcaactgatgt tcttgttgtg taattgtctt tttccttttt taaaaataa
840
ggtgttcttg ttcgttttct tctagaaact ttagaaagag tgcgatgcc ctttgcttt
900
gcatccttag ccagtgtcac ccacacagcc agccgcagcg cattctcatg ctgtggcccc
960
tccccagacc gccagcgcgc tgcagccacc aggtctgcag tgtgcattag gattattgct
1020
ggtcttccta gggggtaaaa ggatcagaga gagaagaatt aagtgcataa ttggaagaaa
1080
accccaatat agttatgtaa aatgtcacta cattgatttt ccaagaggca ttgtaggaac
1140
atgtcaaaaa cagccagccc tttaaatatt gcagtcagcc aaggaaatta gatgagaatt
1200
gtggctatta agagaattca ctgagagtta ttctctagat ttttagccga caattaacca
1260
ctaaaagctg ctgcttttcc aggggtggggg agggaaatgaa tacatagaaa aacaaaaaag
1320
attgttctgg attctcagtg aaaggctata ggaagtctgt tctggagaca tctacttttt
1380
agatcctgat acatcactga gtgtcatact ccactaaaag gaaactctaa ccgaaggctg
1440
gctgggtgta caatcccgtt agttggatct tcacctacag ccagattttg ctctagtggc
1500

gcagctgctg gatgtcagct gtggttatga tcagctccat cttgttatga tgaagaccct
 300
 gaggtcagag tggacccac cccaaagccc catctggcag ctcacagctg ctctctccta
 360
 cagaaacagg cttgcatgct gatccgaaac ctggtggccc acggccaggc cttctcgaag
 420
 cccatcctgg acctgggggc tgaggcactc atcatgcagg cccgatctgc ccaccgtgac
 480
 tgtgaggacg tggccaaggc cgcctgagg gacctgggtt gtcattgca gctccgagag
 540
 ctgtggacag gccagagggg caacctggcg ccatgacccc agggccagtc tgggcccgtga
 600
 ctctgggtga gtcgtgtgac tcaggaatgg gggtagatcc atgtcctcca ctgtccccc
 660
 ttagttctgt ccccttcaca atgagaagtg ttttctggca ggccctaggt aaagggtcgg
 720
 gggagggggg agcctttag ggaggcctct acacagaaga aagcagcccc catgtcccag
 780
 ccacttctgg gtcccagcca gcagcacgga tgttactgtc ctgtccttc cccagcccc
 840
 acgcccacc agagggggca aagggcacgt cccatcactc actgcctgt ctgaaatgtg
 900
 gcagccactg tgggcccaggc tcagggcagg gcaggcgatt ccagtggggg tgggccccct
 960
 ggcgctgct gcttactgca gtttcatgca ggctctgct ccttgtctt cttacctgta
 1020
 aaatgggtct cagatgtcc gccctgcttg gcccagctt gtctgtctct gggctctggg
 1080
 ccagccagga tacctgataa taaaagatca ttgggtgaaa aaaaaaaaaa aaaaaaaaaa
 1139

<210> 5124

<211> 101

<212> PRT

<213> Homo sapiens

<400> 5124

Ser	Ala	Pro	Ser	Cys	Tyr	Asp	Glu	Asp	Pro	Glu	Val	Arg	Val	Asp	Pro
1				5					10					15	
Thr	Pro	Lys	Pro	His	Leu	Ala	Ala	His	Ser	Cys	Ser	Leu	Leu	Gln	Lys
			20					25					30		
Gln	Ala	Cys	Met	Leu	Ile	Arg	Asn	Leu	Val	Ala	His	Gly	Gln	Ala	Phe
		35					40					45			
Ser	Lys	Pro	Ile	Leu	Asp	Leu	Gly	Ala	Glu	Ala	Leu	Ile	Met	Gln	Ala
	50				55					60					
Arg	Ser	Ala	His	Arg	Asp	Cys	Glu	Asp	Val	Ala	Lys	Ala	Ala	Leu	Arg
65				70					75					80	
Asp	Leu	Gly	Cys	His	Val	Glu	Leu	Arg	Glu	Leu	Trp	Thr	Gly	Gln	Arg
			85					90						95	
Gly	Asn	Leu	Ala	Pro											
			100												

<210> 5125

<211> 6244

tgctcagaca acgactgatg aaaacgcca tgcggtttgc atcgactgat agtgtgttct
 720
 ttccgggatc acaaacatta acaaaaaagt taacttatgt gacttggcag ttattctata
 780
 ccatttcctg tccattaaaa tttttaagg aaacggttgt attttattat gttttatgtg
 840
 accttttggc ctttaaagat gacttcccct tgcttttttc ttcttggtgt cctgctgtt
 900
 cctcttgctt tgctttaggc actcgctcat gtggtgggg atcc
 944

<210> 5122

<211> 172

<212> PRT

<213> Homo sapiens

<400> 5122

Met	Pro	Gly	Ile	Val	Glu	Leu	Pro	Thr	Leu	Glu	Glu	Leu	Lys	Val	Asp
1				5					10					15	
Glu	Val	Lys	Ile	Ser	Ser	Ala	Val	Leu	Lys	Ala	Ala	Ala	His	His	Tyr
			20					25					30		
Gly	Ala	Gln	Cys	Asp	Lys	Pro	Asn	Lys	Glu	Phe	Met	Leu	Cys	Arg	Trp
		35				40						45			
Glu	Glu	Lys	Asp	Pro	Arg	Arg	Cys	Leu	Glu	Glu	Gly	Lys	Leu	Val	Asn
	50					55					60				
Lys	Cys	Ala	Leu	Asp	Phe	Phe	Arg	Gln	Ile	Lys	Arg	His	Cys	Ala	Glu
65				70					75					80	
Pro	Phe	Thr	Glu	Tyr	Trp	Thr	Cys	Ile	Asp	Tyr	Thr	Gly	Gln	Gln	Leu
			85					90					95		
Phe	Arg	His	Cys	Arg	Lys	Gln	Gln	Ala	Lys	Phe	Asp	Glu	Cys	Val	Leu
		100						105				110			
Asp	Lys	Leu	Gly	Trp	Val	Arg	Pro	Asp	Leu	Gly	Glu	Leu	Ser	Lys	Val
	115						120					125			
Thr	Lys	Val	Lys	Thr	Asp	Arg	Pro	Leu	Pro	Glu	Asn	Pro	Tyr	His	Ser
	130				135						140				
Arg	Pro	Arg	Pro	Asp	Pro	Ser	Pro	Glu	Ile	Glu	Gly	Asp	Leu	Gln	Pro
145				150				155						160	
Ala	Thr	His	Gly	Ser	Arg	Phe	Tyr	Phe	Trp	Thr	Lys				
			165					170							

<210> 5123

<211> 1139

<212> DNA

<213> Homo sapiens

<400> 5123

nngtgcacaa ccactgtctt cccgtggcct cactgcccc ttgccctagg gcccttctct
 60
 tggctctgtg ccagcctcgg gggacctcag gctcaccaac tctgaggctg agagttccaa
 120
 agccatagga tagatcctgg agcttcctct agcctgtttt cttgcctggg agttagccat
 180
 gccttggtgg gctgccaaga gggtaaagta gagagatggg tctagcttga tacagtatag
 240

115 120 125
 Pro Leu Gln Asn Thr Met Ile Met His Pro Lys Leu Cys Leu Gln Leu
 130 135 140
 Ala Ile Leu Ala Trp Gly Thr Gly Leu Ala Gln Ser Leu Ile Gln Ser
 145 150 155 160
 Pro Ala Thr Leu Arg Leu Pro Phe Cys Ser Gln Arg Met Val Asp Asp
 165 170 175
 Val Val Cys Glu Val Pro Ala Leu Ile Gln Leu Ser Ser Thr Asp Thr
 180 185 190
 Thr Tyr Ser Glu Ile Gln Met Ser Ile Ala Ser Val Val Leu Leu Val
 195 200 205
 Met Pro Leu Ile Ile Ile Leu Ser Ser Ser Gly Ala Ile Ala Lys Ala
 210 215 220
 Val Leu Arg Ile Lys Ser Thr Ala Gly Gln Lys Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Ile Ser His Leu Leu Val Val Ser Leu Phe Tyr Gly Thr Val Thr
 245 250 255
 Gly Val Tyr Leu Gln Pro Lys Asn His Tyr Pro His Glu Trp Gly Lys
 260 265 270
 Phe Leu Thr Leu Phe Tyr Thr Val Val Thr Pro Thr Leu Asn Pro Leu
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Ile Arg Leu
 290 295 300
 Gly Arg Arg Thr Trp Asp Ser Gln Asn Asn
 305 310

<210> 5121

<211> 944

<212> DNA

<213> Homo sapiens

<400> 5121

nngcgcgccca ggggagggcg ccgtgtggca ctccggcggtc gaaaggggag ttcaaggaga
 60
 cgggggcgac gcggtgagg gcttctcgtc ggggtcgggg ctgcagccgt catgccgggg
 120
 atagtggagc tgccactct agaggagctg aaagtagatg aggtgaaaat tagttctgct
 180
 gtgcttaaag ctgcggccca tcactatgga gctcaatgtg ataagcccaa caaggagttt
 240
 atgctctgcc gctgggaaga gaaagatccg aggcggtgtt tagaggaagg caaactgggtc
 300
 aacaagtgtg ctttggactt ctttaggcag ataaaacgtc actgtgcaga gccttttaca
 360
 gaatattgga cttgcattga ttatactggc cagcagttat ttcgtcactg tcgcaaacag
 420
 caggcaagt ttgacgagtg tgtgctggac aaactgggct ggggtcggcc tgacctggga
 480
 gaactgtcaa aggtcaccaa agtgaaaaca gatcgacctt taccggagaa tccctatcac
 540
 tcaagaccaa gaccggatcc cagccctgag atcgaggag atctgcagcc tgccacacat
 600
 ggcagccgct tttatttctg gaccaagtaa agatgggtcc gtggcccaca ctccgtcatg
 660

gtccttcttg ttgtcatggc tgtggattgt tatgtagcag tgtgtcatcc actgcaaaat
 600
 accatgatca tgcacccaaa actttgtctg cagctggcta tcttggcatg ggggactggc
 660
 ttggccagct ctctgatcca gtccctgcc accctccggt tacccttctg ctcccagcgg
 720
 atgggtggatg atgttgtttg tgaagtccca gctctgattc agctctccag tactgatact
 780
 acctacagtg aaattcagat gtctatcgcc agtgttgctc tcctgggtgat gcccttgatc
 840
 attatccttt cctcttctgg tgctattgct aaggctgtgc tgagaattaa gtcaactgca
 900
 ggacagaaga aagcatttgg cacctgcac cctcaccttc ttgtgggttc tctcttttat
 960
 ggcactgtca cagggtgtcta ccttcaacca aaaaatcact atcctcatga atggggcaaa
 1020
 tttctcactc ttttctacac tgtagtaacc ccaactctta atccctcat ctacactcta
 1080
 aggaacaagg aggtaaagg agcactaata agattgggga ggaggacctg ggattcccag
 1140
 aataactaac aagggttaaca tatgtttacc tttgcttaac ctaagaatag agaacaacct
 1200
 catcacaaaa agctggagat acacctccta agccaaaagt aggagagaaa gagctgcatt
 1260
 ctgttcaggt tgagatttca gtttccttca tcaatcaatt gggcccttaa attcttcata
 1320
 ttgtggattt agacacagta tgggtataaaa attaatatat ttaatagcta ttgtcttgaa
 1380
 aaggacacaa tgcaattgaa tgggggagga ggagaagaca caagaaacac attacttgca
 1440
 aaataaaata
 1450

<210> 5120

<211> 314

<212> PRT

<213> Homo sapiens

<400> 5120

Met Ile Ile Ile Cys Asn Asp Ser His Ser Asp Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Ser Asn Lys Pro His Leu Glu Lys Ile Leu Phe Xaa Ile Ile Phe
 20 25 30
 Ile Phe Tyr Phe Leu Thr Leu Ala Gly Asn Met Val Ile Val Leu Val
 35 40 45
 Ser Leu Lys Asp Pro Lys Leu His Ile Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 Asn Leu Ser Leu Val Asp Leu Cys Leu Thr Ser Ser Cys Val Pro Gln
 65 70 75 80
 Met Leu Ile Asn Phe Trp Gly Pro Glu Lys Thr Ile Ser Tyr Ile Gly
 85 90 95
 Cys Ala Ile Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Tyr
 100 105 110
 Val Leu Leu Val Val Met Ala Val Asp Cys Tyr Val Ala Val Cys His


```

65          70          75          80
Ile Ser Arg Cys Ile Ile Ser Ser Cys Pro Gly Pro His Ala Ile Val
          85          90          95
Leu Val Leu Leu Leu Gly Arg Tyr Thr Glu Glu Glu Gln Lys Thr Val
          100          105          110
Ala Leu Ile Lys Ala Val Phe Gly Lys Ser Ala Met Lys His Met Val
          115          120          125
Ile Leu Phe Thr Arg Lys Glu Glu Leu Glu Gly Gln Ser Phe His Asp
          130          135          140
Phe Ile Ala Asp Ala Asp Val Gly Leu Lys Ser Ile Val Lys Glu Cys
145          150          155          160
Gly Asn Arg Cys Cys Ala Phe Ser Asn Ser Lys Lys Thr Ser Lys Ala
          165          170          175
Glu Lys Glu Ser Gln Val Gln Glu Leu Val Glu Leu Ile Glu Lys Met
          180          185          190
Val Gln Cys Asn Glu Gly Ala Tyr Phe Ser Asp Asp Ile Tyr Lys Asp
          195          200          205
Thr Glu Glu Arg Leu Lys Gln Arg Glu Glu Val Leu Arg Lys Ile Tyr
          210          215          220
Thr Asp Gln Leu Asn Glu Glu Ile Lys Leu Val Glu Glu Asp Lys His
225          230          235          240
Lys Ser Glu Glu Glu Lys Glu Lys Glu Ile Lys Leu Leu Lys Leu Lys
          245          250          255
Tyr Asp Glu Lys Ile Lys Asn Ile Arg Glu Glu Ala Glu Arg Asn Ile
          260          265          270
Phe Lys Asp Val Phe Asn Arg Ile Trp Lys Met Leu Ser Glu Ile Trp
          275          280          285
His Arg Phe Leu Ser Lys Cys Lys Phe Tyr Ser Ser
          290          295          300

```

<210> 5119

<211> 1450

<212> DNA

<213> Homo sapiens

<400> 5119

```

nnaatgatga atatcaaaga ttaaagcact tcactaaatc ttgtattttt tcccaaaata
60
cagctggtga aaatcttata cttgagtaga aaggaatcaa acaagtata taccacccgt
120
cttctgtct gtactggaac catcacagga ttttgaggaa ctacttttga accgttcccc
180
agagaggcat ttgccccagt agctatgatt ataatttgca atgacagcca cagtgtttc
240
atccttctgg gcttctctaa caagccacat ttggagaaga tactttttng gatcattttt
300
attttttatt ttttgactct tgcaggaaat atggatcatag ttcttgtgtc cttgaaggat
360
ccaaaactcc acatccctat gtattttctt ctttccaacc tttccttggg agacctctgt
420
ttgaccagca gctgtgttcc acagatgttg attaaacttct ggggccccaga aaagaccatc
480
agctacattg gctgtgccat tcaactctat gtttttttgt ggcttggggc cacggaatat
540

```

gtgagcatgg ctgagagtga ggaccgctcc ctgaggatcg ttctggtagg gaaaactgga
 120
 agtgggaaaa gtgcaacagc gaacaccatc cttggagagg aaatctttga ttctagaatt
 180
 gctgccccaa ctgttaccaa gaactgtcaa aaagcatccc gggaatggca ggggagagac
 240
 cttcttggtg tagacactcc agggctcttt gacaccaagg agagcctgga caccacctgc
 300
 aaggaaatca gccgctgcat catctcctcc tgcccagggc cccatgctat tgtcctagtt
 360
 ctgctgctgg gccgctacac agaggaggag cagaaaaccg ttgcattgat caaggctgtc
 420
 tttgggaagt cagccatgaa gcacatggtc atcttggtca ctgcgaaaga agagttggag
 480
 ggccagagct tccatgactt catagcagat gcggatgtgg gcctaaaaag catcgtcaag
 540
 gagtgcggga accgctgctg tgccttttagc aacagcaaga aaaccagtaa ggcagagaag
 600
 gaaagtcaag tgcaggagtt ggtggagctg atagagaaaa tggcgcagtg caacgaaggg
 660
 gcttactttt ctgatgacat atacaaggac acagaggaaa ggctgaaaca acgggaagag
 720
 gttttgagga aaatctacac tgaccaatta aatgaagaaa ttaaactagt agaagaggat
 780
 aagcataaat cagaggaaga aaaggagaaa gaaattaaat tactaaaatt aaaatatgat
 840
 gaaaaaataa aaaatataag ggaagaagct gagagaaata tatttaaaga tgtttttaat
 900
 aggatattga agatgctttc agaaatatgg cataggtttt tgtcgaaatg taagttttat
 960
 tcttctaata ttactgtgat ttgttaatgg atgaattgta ttttgcaaag atagttagag
 1020
 aaatacctcc ttccccttag ctttattaag gtatcattga taaataaaaa taaaatatgt
 1080
 ttaatgtata taatgtgatt tttaaatata tatatatata tatacacaca ttgtgaaata
 1140
 atgaaataaa ggtaattaac acatctaaaa aaaaaaaaaa
 1180

<210> 5118

<211> 300

<212> PRT

<213> Homo sapiens

<400> 5118

Met	Ala	Glu	Ser	Glu	Asp	Arg	Ser	Leu	Arg	Ile	Val	Leu	Val	Gly	Lys
1				5					10					15	
Thr	Gly	Ser	Gly	Lys	Ser	Ala	Thr	Ala	Asn	Thr	Ile	Leu	Gly	Glu	Glu
			20					25					30		
Ile	Phe	Asp	Ser	Arg	Ile	Ala	Ala	Gln	Ala	Val	Thr	Lys	Asn	Cys	Gln
			35				40					45			
Lys	Ala	Ser	Arg	Glu	Trp	Gln	Gly	Arg	Asp	Leu	Leu	Val	Val	Asp	Thr
			50				55				60				
Pro	Gly	Leu	Phe	Asp	Thr	Lys	Glu	Ser	Leu	Asp	Thr	Thr	Cys	Lys	Glu

agggctgggt ggtcagcatg ggcagtggcg cttcgggagg gcgcctccac tgggctcccc
 840
 agtcgtatgc tcacgtcccc aggtcaaggg ggcattgccag ggtggggagg gcgtcaggcc
 900
 gctgctagga tgcgggccag caacagcggg ncaggaggtg gttcccacgg cgctgggnag
 960
 gctcacgccg gaggtggggg tggggggga tgctgatggg tcg
 1003

<210> 5116
 <211> 226
 <212> PRT
 <213> Homo sapiens

<400> 5116
 Met Leu Leu Arg Val Gly Gly Gly Arg Asn Gly Asp Pro Ala Pro Ser
 1 5 10 15
 Arg Gly Ser Gln Val Thr Ala Gly Glu Ala Asp Gly Arg Ala Pro Gly
 20 25 30
 Ser Pro Gly Pro Gln Ala Leu Lys Gly Gly Ala Arg Gly Ser Gly His
 35 40 45
 Val Leu Thr Ser Ser Ser Gly Ser Ala Cys Ala Gly Ser Pro Leu Cys
 50 55 60
 Pro Ala Met Ser His Leu Gly Val Ser His Val Arg Glu Gln Leu Leu
 65 70 75 80
 Leu Ser Ile Met Gln Phe Leu Ser Trp Val Ile Ala Val His Gly Glu
 85 90 95
 Gln Val His Ala Gln Pro Val His Pro Leu Phe Leu Leu Tyr Ile His
 100 105 110
 Tyr His Ser His His His Pro Asp Gln Gly Asp Glu Glu Glu Gly Pro
 115 120 125
 Gln His Ile Ala His His Gly Val Ala Val Gly Leu Gly Gly Ile Gly
 130 135 140
 His Ser Gly Val Thr His Asp Ile Ser Ser Arg Arg Ala Gly Trp Ser
 145 150 155 160
 Ala Trp Ala Val Ala Leu Arg Glu Gly Ala Ser Thr Gly Leu Pro Ser
 165 170 175
 Arg Met Leu Ile Val Pro Gly Gln Gly Gly Met Pro Gly Trp Gly Gly
 180 185 190
 Arg Gln Ala Ala Ala Arg Met Arg Ala Ser Asn Ser Gly Xaa Gly Gly
 195 200 205
 Gly Ser His Gly Ala Gly Xaa Ala His Ala Gly Gly Gly Val Gly
 210 215 220
 Gly Cys
 225

<210> 5117
 <211> 1180
 <212> DNA
 <213> Homo sapiens

<400> 5117
 nngaattcaa cttgttcaag agaaggtctt gtacgtgcct aagttctaga gcctcctgac
 60

<210> 5114
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5114
 Met Val Gln Pro Leu Leu His Val Pro Pro Val Gly Leu Cys Asp Leu
 1 5 10 15
 Ser Pro Gly Thr Leu Thr Arg Cys Leu Phe Cys Ser Pro Leu Asn Ser
 20 25 30
 Met His Leu Thr Pro Val Ile Gly Thr Gln Arg Gly Ala Trp His Leu
 35 40 45
 Gln Cys Arg His Thr Gly His Arg Ser Val Gln Glu Gly Pro Phe Ala
 50 55 60
 Asn Val His Ser Ser Leu Cys Leu Phe Ser Tyr Ala Phe Leu Asp Trp
 65 70 75 80
 Ser Lys Arg Phe Phe Phe Pro Ser Lys Glu Gln Phe Met Phe Leu Asn
 85 90 95
 Thr Phe Phe Pro
 100

<210> 5115
 <211> 1003
 <212> DNA
 <213> Homo sapiens

<400> 5115
 nttttttttt tttttttttt tttttttttt tttttttttt ttttttttag ccacaaaaca
 60
 tttttattac aaaatatata ctgaatacta tacatctggc cccatcacca tggaaacaac
 120
 tccaaagcct gcctggggat ttgtgcccga gccagccca ggagggttag agaaagcaaa
 180
 ggtgtctacc agccgccgcc atcccagaag gaaagcctct tcccatgagt gcctgtgggt
 240
 gggcggtag ctcaacaccc acaaaggcca gaaggcctgg gggcagtgag gtgatgggta
 300
 gggcatggga agcagatgct gctgaggggt ggtggaggga gaaatggaga cccagcaccc
 360
 agcaggggga gccaggtgac agcaggggaa gcagatggca gggccccagg cagtccagga
 420
 cccaggtctc tgaagggtgg ggcaaggggg tcaggtcacg tcttgacatc cagcagtggc
 480
 tccgcttggt ctggtagccc actctgccc gccatgtccc acctgggggt ctcccatgtc
 540
 agagagcagc tcctgctcag catcatgcag ttectcagct gggcatagc tgtacatggg
 600
 gagcaggtgc atgcgcagcc ggtccacccg ctttttcttc tgtacatata ttaccacagc
 660
 caccaccacc ccgaccaggg tgatgaggaa gaaggggccc aacacatagc ccaccatgga
 720
 gtcgctgttg gcctgggggg cattggggcac agtggtgtta ctcatgacat cagcagccgg
 780

340 345 350
 Asn Lys Gly Leu Lys Val Leu Ile Glu Ala Thr Lys Ala Phe Leu Asp
 355 360 365
 Asn Pro Gly Ile Leu Ser Glu Leu Cys Gly Thr Leu Ser Arg Leu Ala
 370 375 380
 Ile Arg Asn Glu Phe Cys Gln Glu Val Val Asp Leu Gly Gly Leu Ser
 385 390 395 400
 Ile Leu Val Ser Leu Leu Ala Asp Cys Asn Asp His Gln Met Arg Asp
 405 410 415
 Gln Ser Gly Val Gln Glu Leu Val Lys Gln Val Leu Ser Thr Leu Arg
 420 425 430
 Ala Ile Ala Gly Asn Asp Asp Val Lys Asp Ala Ile Val Arg Ala Gly
 435 440 445
 Gly Thr Glu Ser Ile Val Ala Ala Met Thr Gln His Leu Thr Ser Pro
 450 455 460
 Gln Val Trp Glu Gln Ser Cys Ala Ala Leu Cys Phe Leu Ala Leu Arg
 465 470 475 480
 Lys Pro Asp Asn Ser Arg Ile Ile Val Glu Gly Gly Gly Ala Val Ala
 485 490 495
 Ala Leu Gln Ala Met Lys Ala His Pro Gln Lys Ala Gly Val Gln Lys
 500 505 510
 Gln Ala Cys Met Leu Ile Arg Asn Leu Val Ala His Gly Gln Ala Phe
 515 520 525
 Ser Lys Pro Ile Leu Asp Leu Gly Ala Glu Ala Leu Ile Met Gln Ala
 530 535 540
 Arg Ser Ala His Arg Asp Cys Glu Asp Val Ala Lys Ala Ala Leu Arg
 545 550 555 560
 Asp Leu Gly Cys His Val Glu Leu Arg Glu Leu Trp Thr Gly Gln Arg
 565 570 575
 Gly Asn Leu Ala Pro
 580

<210> 5113

<211> 472

<212> DNA

<213> Homo sapiens

<400> 5113

cagactatgg tccagcctct gctccatgtg cccctgtgg gtctttgtga tctcagtcct
 60
 ggcaacctga cccgctgctt gttctgctct cctttaaact ccatgcacct gacacctgta
 120
 attggcacgc agcgcggagc ctggcacctg cagtgtagac aactggcca ccgctcagt
 180
 caagagggcc cctttgctaa tgtgcacagc tctttatgcc ttttttcta tgcctttttg
 240
 gattggagca agagattttt tttccaagt aaagaacaat ttatgttcct aaatactttt
 300
 tttccttgac atgatgaagt tgagcaaggt ggctatagaa ctttttttct taattttatt
 360
 gcccaagtaa tgttctttac aaagtaggga aatacagata cataaaaaga agactgccaa
 420
 tcccccgtaa tcccaccagt cgcaccccta cccgctctta ggagattccg ga
 472

gggtcccagcc agcagcacgg atgttactgt cctgtctcctt ccccagccc cagccctac
 2220
 cagagggggc aaagggcacg tcccatc
 2247

<210> 5112

<211> 581

<212> PRT

<213> Homo sapiens

<400> 5112

Ala	Lys	His	Phe	Pro	Ala	Gly	Gly	Gly	Asp	His	Arg	Glu	Arg	Pro	Gly
1				5					10					15	
Arg	Gly	Gly	Lys	Asp	Ala	Ser	Val	Ala	His	Glu	Val	Ala	Ser	Leu	Ala
			20					25					30		
Leu	Pro	Trp	Phe	Ala	Val	Val	Leu	Gly	Tyr	Arg	Glu	Arg	Pro	Arg	Val
		35					40					45			
Ser	Gly	Arg	Pro	Ser	Leu	Gly	Ala	Pro	Gln	Arg	Leu	Arg	Ala	Tyr	Gly
	50					55					60				
Gly	Arg	Lys	Gly	Leu	Glu	Ala	Ala	Pro	Trp	Val	Thr	Thr	Ala	Arg	Pro
65				70					75					80	
Thr	Phe	Pro	His	Val	Ala	Ala	Lys	Thr	Gly	Ser	Gly	Ala	Ser	Ile	Gly
			85					90						95	
Cys	Thr	Pro	Thr	Ser	Thr	Gln	Ala	Lys	Met	Val	Ser	Lys	Arg	Ile	Ala
			100					105					110		
Gln	Glu	Thr	Phe	Asp	Ala	Ala	Val	Arg	Glu	Asn	Ile	Glu	Glu	Phe	Ala
			115				120					125			
Met	Gly	Pro	Glu	Glu	Ala	Val	Lys	Glu	Ala	Val	Glu	Gln	Phe	Glu	Ser
	130					135					140				
Gln	Gly	Val	Asp	Leu	Ser	Asn	Ile	Val	Lys	Thr	Ala	Pro	Lys	Val	Ser
145				150					155					160	
Ala	Asp	Gly	Ser	Gln	Glu	Pro	Thr	His	Asp	Ile	Leu	Gln	Met	Leu	Ser
			165					170						175	
Asp	Leu	Gln	Glu	Ser	Val	Ala	Ser	Ser	Arg	Pro	Gln	Glu	Val	Ser	Ala
			180					185					190		
Tyr	Leu	Thr	Arg	Phe	Cys	Asp	Gln	Cys	Lys	Gln	Asp	Lys	Ala	Cys	Arg
		195					200					205			
Phe	Leu	Ala	Ala	Gln	Lys	Gly	Ala	Tyr	Pro	Ile	Ile	Phe	Thr	Ala	Arg
	210					215					220				
Lys	Leu	Ala	Thr	Ala	Gly	Asp	Gln	Gly	Leu	Leu	Gln	Ser	Leu	Asn	
225				230					235					240	
Ala	Leu	Ser	Val	Leu	Thr	Asp	Gly	Gln	Pro	Asp	Leu	Leu	Asp	Ala	Gln
			245					250						255	
Gly	Leu	Gln	Leu	Leu	Val	Ala	Thr	Leu	Thr	Gln	Asn	Ala	Asp	Glu	Ala
			260					265					270		
Asp	Leu	Thr	Cys	Ser	Gly	Ile	Arg	Cys	Val	Arg	His	Ala	Cys	Leu	Lys
		275					280					285			
His	Glu	Gln	Asn	Arg	Gln	Asp	Leu	Val	Lys	Ala	Gly	Val	Leu	Pro	Leu
	290					295					300				
Leu	Thr	Gly	Ala	Ile	Thr	His	His	Gly	His	His	Thr	Asp	Val	Val	Arg
305				310					315					320	
Glu	Ala	Cys	Trp	Ala	Leu	Arg	Val	Met	Thr	Phe	Asp	Asp	Asp	Ile	Arg
			325					330						335	
Val	Pro	Phe	Gly	His	Ala	His	Asn	His	Ala	Lys	Met	Ile	Val	Gln	Glu

gagacctttg atgcagctgt gcgcgagaac atcgaggagt ttgcgatggg gccagaggag
600
gcagtgaag aggccgtgga gcagtttgaa tcgcaagggg ttgatctgag caacattgta
660
aagacggcac ctaaagtctc tgcagacgga tcccaggagc ccacacatga catcctgacg
720
atgctcagt acctccagga gtctgtggcc agctctcgcc cccaggaggt gtcagcatac
780
ctcacccgct tctgcgacca gtgcaaacag gacaaggcct gccgcttcct cgcggccccag
840
aagggggcct accccatcat cttcactgcc aggaagctgg ccactgcagg tgaccagggc
900
cttctgctcc agtccctcaa tgccctgtcg gtgctgactg atggacagcc agacctcctg
960
gatgccagg gcctgcagct cctagtggcc acgctgacct agaattgctga tgaggctgac
1020
ctgacctgct ctgggatccg ctgtgtgcgt cacgcttgcc tgaaacatga acagaatcgg
1080
caagacctgg tgaaagctgg cgtgtgcct ctgtgactg gtgccatcac ccatcatggc
1140
caccacactg acgtggtcag ggaagcctgc tgggccctgc gtgtcatgac cttcgatgac
1200
gacatccgtg tgcccttttg ccatgcccac aaccatgcca agatgattgt gcaggagaac
1260
aaaggcttga aggtgctcat cgaagccacc aaagcgctcc tggataaacc tggcatcctg
1320
agcgagctct gtggaacct gtcccgcctg gccattcgca acgagttctg ccaggaggtc
1380
gtcgacctg ggggcctgag cattctggtg tccctgctag ccgactgcaa tgaccaccag
1440
atgagggacc agagcggcgt tcaggagctc gtgaagcaag tgctgagcac cctgcgagcc
1500
atcgcaggca acgacgacgt gaaagatgct attgtccgtg ctggtgggac ggagtccatc
1560
gtggctgcta tgaccagca tctgaccagc ccccagggtg gggagcagag ctgcgcggcc
1620
ctgtgcttcc tggccctgag taagcccagc aacagccgca tcactgtgga ggggtggcggg
1680
gctgtggcag cactgcaggc catgaaggca cccccgaga aggccggcgt gcagaaacag
1740
gcttgcacgc tgatccgaaa cctggtggcc cacggccagg ctttctcgaa gcccatcctg
1800
gacctggggg ctgaggcact catcatgcag gcccgatctg cccaccgtga ctgtgaggac
1860
gtggccaagg ccgccctgag ggacctgggt tgtcatgtcg agctccgaga gctgtggaca
1920
ggccagaggg gcaacctggc gccatgacct caggcccagt ctgggccgtg actctgggtg
1980
agtcgtgtga ctcaggaatg ggggtagatc catgtcctcc actgtcccc attagttctg
2040
tccccttcac aatgagaagt gttttctggc aggccctagg taaagggtcg ggggaggggg
2100
gagccttgta gggaggcctc tacacagaag aaagcagccc ccatgtccca gccacttctg
2160

<213> Homo sapiens

<400> 5110

```

Leu Leu Glu Lys Ile Arg Glu Pro Ala Leu Gln Xaa Ala Gln Trp Thr
 1           5           10           15
Phe Glu Ser Ala Val Gln Glu Asn Ile Ser Ile Asn Gly Gln Ala Trp
      20           25           30
Gln Glu Ala Ser Asp Asn Cys Phe Met Asp Ser Asp Ile Lys Val Leu
      35           40           45
Glu Asp Gln Phe Asp Glu Ile Ile Val Asp Ile Ala Thr Lys Arg Lys
      50           55           60
Gln Tyr Pro Arg Lys Ile Leu Glu Cys Val Ile Lys Thr Ile Lys Ala
      65           70           75           80
Lys Gln Glu Ile Leu Lys Gln Tyr His Pro Val Val His Pro Leu Asp
      85           90           95
Leu Lys Tyr Asp Pro Asp Pro Val Leu Asn Gly Asn Ala Phe Asn Phe
      100          105          110
Ser Pro Phe Asn Met Met Leu Ala Val Asp Leu Ser Tyr Met Val Phe
      115          120          125
Ile Thr Ser Ala Pro His Met Glu Asn Leu Lys Cys Arg Gly Glu Thr
      130          135          140
Val Ala Lys Glu Ile Ser Glu Ala Met Lys Ser Leu Pro Ala Leu Ile
      145          150          155          160
Glu Gln Gly Glu Gly Phe Ser Gln Val Leu Arg Met Gln Pro Val Ile
      165          170          175
His Leu Gln Arg Ile His Gln Glu Val Phe Ser Ser Cys His Arg Lys
      180          185          190
Pro Asp Ala Lys Pro Glu Asn Phe Ile Thr Gln Ile Glu Thr
      195          200          205

```

<210> 5111

<211> 2247

<212> DNA

<213> Homo sapiens

<400> 5111

```

nccccgcgcg cgcctcagg ctctcaccc gccgcgcgcg ccgcgcgagg cggggacatg
60
caaatgaacc aacggtctcc gcagcgccgc gccgcgcagg cgcaagccgc cgccgagtcc
120
tggtgcgcag gcgcgggccc ccgcggcccc gctctcttgc gcaagcgcgc tgcccgcttc
180
ttctgggccc acgctctgga ggcaaaacat ttccctgctg ggggcggcga ccaccgtgag
240
cgccccgaa ggggcggcaa agacgcctcc gtgcgcacg aggtggcctc gttggcttta
300
ccttggttcg cggtcgtect tggttatcgt ggcgtccgc gactctctgg gaggccaagc
360
ctagggggcg cacagcgctt gcgcgcgtac ggcggccgga aggggctaga ggcggtcc
420
tggtgacaaa ccgcgcgcgc cacctttccc cacgtggcgc cgaagaccgg ctccaggagc
480
tctatcggtt gcacgccaac atcaacacag gcgaagatgg tctccaagcg cattgcccag
540

```


ggccggc
1207

<210> 5108
<211> 83
<212> PRT
<213> Homo sapiens

<400> 5108
Met Arg Thr Gly Arg Ser Arg Ala Pro Ala Pro Val Cys Ile Tyr Leu
1 5 10 15
Phe Ile Tyr Leu Phe Arg Asp Arg Val Ser Leu Cys Arg Xaa Arg Gly
20 25 30
Val Gln Trp Arg Asn Leu Ser Ser Leu Gln Pro Pro Pro Gly Phe
35 40 45
Lys Arg Phe Ser Cys Leu Ser Leu Leu Ser Ser Trp Asp Tyr Arg Arg
50 55 60
Val Pro Pro Cys Pro Ala Asn Phe Cys Ile Phe Ser Arg Asp Arg Val
65 70 75 80
Ser Pro Cys

<210> 5109
<211> 651
<212> DNA
<213> Homo sapiens

<400> 5109
nnggccgctt ccgtgcaaaa gctcggggac gctctgctgg agaagattcg ggagcccgcg
60
ctgcagnatg cgcagtggac ttttgaatca gctgtgcaag agaatatcag cattaatggg
120
caagcatggc aggaagcttc agataattgt tttatggatt ctgacatcaa agtacttgaa
180
gatcagtttg atgaaatcat agtagatata gccacaaaac gtaagcagta tcccagaaag
240
atcctggaat gtgtcatcaa aaccataaaa gcaaaacaag aaattctgaa gcagtaccac
300
cctgttgtag atccactgga cctaaaatat gacctgac cagttctcaa cggaatgct
360
ttcaactttt cccattcaa catgatgttg gctgtggatt tgcatatat ggtttttatt
420
acttcggccc ctcatatgga aaatttgaaa tgcagagggg aaacagtagc aaaggagatc
480
agtgaagcca tgaagtcctt gcctgcatta attgaacaag gagagggatt ttcccaagtt
540
ctcaggatgc agcctgttat ccacctccag aggattcacc aagaagtctt ttccagttgt
600
cataggaaac cagatgctaa acctgagaac ttataaacac agatagaaac c
651

<210> 5110
<211> 206
<212> PRT

4293

gggcatcagc acacgtggca agctggcagc actcaccaac tacctgcagc cgcagctgga
 540
 ctggcaggcc cgagggcgag cacagcaaag ggagacgtca tttgctacta tgggaaccga
 600
 ggggagcctg atcctatcgt tttgacgccc ggcacgtacg ggctgagcaa cgcgctgctg
 660
 gagactccct ggaggaagct gtgctttggg aagcagctct tcctggaggc tgtggaacgg
 720
 agccaggcgc tgcccaagga tgtgctcatc gccagcctcc tggatgtgct caacaatgaa
 780
 gaggcgcagc tgccagaccc ggccatcgag gaccagggtg gggagtacgt gcagcccatg
 840
 ctgagcaagt acgcggtctgt gtgcgtgcgc tgccctggct acggcaccag aaccaacact
 900
 atcctcctgg tagatgcgga cggccacgtg accttcactg agcgtagcat gatggacaag
 960
 gacctctccc actgggagac cagaacctat gagttcacac tgcagagcta accccacctc
 1020
 tgggcctggc cagtgggctc ctggggggcc ctgccttgag gggcactgtg gacaggaaac
 1080
 cttcctttgc catactgcat tgcactgccc gtggcttggc cagcatcccc cggatcaggg
 1140
 ccctgtgggt tgcgtgttac ccatctgtgt ccccatgccc agttcagggt ctgcctttat
 1200
 gccagtgagg agcagcagag tctgatacta ggtctaggac cggccgaggt ataccatgaa
 1260
 catgtggata gacctgagcc cactcttgca catgtacaca ggcactcaca tggcacacac
 1320
 atacactcct gcgtgtgcac aagcacacac atgccaggc
 1359

<210> 5106

<211> 178

<212> PRT

<213> Homo sapiens

<400> 5106

Met	Ala	Gly	His	Gln	His	Thr	Trp	Gln	Ala	Gly	Ser	Thr	His	Gln	Leu
1				5				10						15	
Pro	Ala	Ala	Ala	Ala	Gly	Leu	Ala	Gly	Pro	Arg	Ala	Ser	Thr	Ala	Lys
		20						25					30		
Gly	Asp	Val	Ile	Cys	Tyr	Tyr	Gly	Asn	Arg	Gly	Glu	Pro	Asp	Pro	Ile
	35						40				45				
Val	Leu	Thr	Pro	Gly	Thr	Tyr	Gly	Leu	Ser	Asn	Ala	Leu	Leu	Glu	Thr
	50				55					60					
Pro	Trp	Arg	Lys	Leu	Cys	Phe	Gly	Lys	Gln	Leu	Phe	Leu	Glu	Ala	Val
65				70					75					80	
Glu	Arg	Ser	Gln	Ala	Leu	Pro	Lys	Asp	Val	Leu	Ile	Ala	Ser	Leu	Leu
			85					90					95		
Asp	Val	Leu	Asn	Asn	Glu	Glu	Ala	Gln	Leu	Pro	Asp	Pro	Ala	Ile	Glu
	100						105					110			
Asp	Gln	Gly	Gly	Glu	Tyr	Val	Gln	Pro	Met	Leu	Ser	Lys	Tyr	Ala	Ala
	115					120					125				
Val	Cys	Val	Arg	Cys	Pro	Gly	Tyr	Gly	Thr	Arg	Thr	Asn	Thr	Ile	Ile

99
1982

<210> 5104
<211> 167
<212> PRT
<213> Homo sapiens

<400> 5104

```

Met Phe Ile Leu Lys His Thr Ser Lys Gln Asp Lys Gln Gln Tyr Val
 1           5           10           15
Ser Leu Leu His Cys Arg Ser Ser Leu Asn Leu Pro Arg His Pro Pro
      20           25           30
Leu His Leu Phe Pro Gln Glu Leu Leu Gly His Phe Phe Cys Leu Trp
      35           40           45
Pro Ala Ala Ser Leu Lys Thr Thr Lys Asp Leu Met Ser Lys Ser Leu
      50           55           60
Ser Gly Val Cys Pro Ala Ser Ser Gly Leu Leu Arg Thr Pro His Pro
      65           70           75           80
Glu Gly Ala Arg Arg Pro Ala Gly Leu Ala Gly Pro Gly Ser Ser Leu
      85           90           95
Thr Ala Gly Trp Thr Ala Phe Arg Thr Cys Pro Gly Cys Ser Ala Phe
      100          105          110
Val Ala Gly Ser Asn Trp Arg Asn Leu Glu Arg Gly Ser Cys Ala Cys
      115          120          125
Lys Asp Gly Phe Cys Val Ser Ser Gly Phe Leu Leu Ser Gly Pro Gly
      130          135          140
Ser Ser Leu Val Pro Tyr Arg Pro Leu Phe Val His Gly Leu Ala Leu
      145          150          155          160
Tyr Glu Arg Ala Met Cys Phe
      165

```

<210> 5105
<211> 1359
<212> DNA
<213> Homo sapiens

<400> 5105

```

ntgctgatgg aatgtttctg ttcagggctg ttgtgacagt tgtgaagaga cagtccggcc
 60
agtgccaatg agtgcattgg ttgggagttg ttttgtgtgc ccccgcaaa gagtgtggg
 120
tccagttccc cccacacca gcaaagtgga caagaccccc cagaggtggt tctctctgtt
 180
ctggcttggt gcaggttcgg agggcagccc tgagtgtctg ccatccgctc aactcagtt
 240
tttccttttc ccgcagacct cgcgacctgt gtcagcagag ccgccctgca ccaccatgtg
 300
catcatcttc tttaagtttg atcctcgccc tgtttccaaa aacgcgtaca ggctcatctt
 360
ggcagccaac agggatgaat tctacagccg accctccaag ttagctgact tctgggggaa
 420
caacaacgag atcctcagtg ggctggacat ggaggaaggc aaggaaggag gcacatggct
 480

```

ttttggatgt atttccttct agcatgtaga aagggctttt cttggctgcc aggaagtagg
420
gagcagggat gtggcatggt gatgatctga ggacagccag gcatatgctc agacactttg
480
gaaaactggg gagggggaac agggagacag aatcttcac tcttccttt tgtgaactgg
540
ggaggagggt gcttggtgac attttcctga gtataaagaa ggaatacagg tttgaaagg
600
ttgtaattgt atatgaaaac aggtattgaa aaccaatact gggggaaaaa aggcattgta
660
aacacttcta tttaaaatga agatttctgg aacaactata ctatatagtg gtatcacaag
720
tcttttagctg gtaagatcta gcactgaaac aactcttaat ttttaacttg tgagggttct
780
ttttaaagca ccacttaaga cctatatatt aaaaaaatta aatatagaaa gattgttcta
840
tctaataaat gagtttgaga atgcacagga aacaacaaaa cccattttta acctctggta
900
actgaagtgg agcattaaat tcaaagccac tttgaggatt tctacattg ttcacctaag
960
ggaaaacaaa tgcagagcta tcaaagagct tctcgataaa tcccagacc ttggagggt
1020
acagcttttc ataaatatgg tcaactggact gatgatttct aaatttttaa tgtaataccc
1080
ccaaaaagta aaatatagga tttataagta ttttattttt ctgagaaatg accaaaaaat
1140
tggaaccagt tttacaatc tctgaaaact ttaaattcta gacatgttta ttttgaaca
1200
cacttccaaa caagataaac aacaatatgt aagtctacta cactgcagaa gtagcttaaa
1260
cttgccaaga catcctcctt tgcacttggt tctcaagag ttgctaggtc atttttttg
1320
cctgtggcca gcagcctctt taaaaacaac aaaggaccta atgtcaaagt cactctcagg
1380
tgtttgccct gccagctcag gccttctccg cacaccgcac cccgaaggag cacggaggcc
1440
cgcagggtg gctggccctg gttccagcct caccgcccgt tggaccgctt ttcgtacttg
1500
tcctggctgc tccgctttcg tggcggggag taactggcgg aacctcgagc gcggaagctg
1560
tgcttgtaag gatggttct gtgtttcttc gggttttctt ctttctgggc ctggctcttc
1620
gctggttct tctgccttc tttttgttca tggctctgct ctttatgaga gggcaatgtg
1680
tttttaattg tgtaattag aaatctttta ttggtgctag caagaggaca cttcatccaa
1740
cccattgggtc ccattgttct agctctagtt tcccacgtt ttgcctcctt aagcagttct
1800
tctattgctt tctctccag ctctgatcc tcttccatcg ctggggcggt ttctggatcc
1860
tcaggtgggtg ctggcggatc gggggctctg tcccatagcg cgaggcgcg aggcgaagca
1920
ggaagcaagg accgaccgac ggaaggcgcg gaggacggaa ggaggaggga ggagcgcagc
1980

165 170 175
 Arg Arg Gly Val Ala Leu Leu Arg Pro Glu Pro Leu His Arg Gly Thr
 180 185 190
 Ala Asp Thr Leu Leu Asn Arg Val Lys Lys Leu Pro Cys Gln Ile Thr
 195 200 205
 Ser Tyr Leu Val Ala His Thr Leu Gly Arg Arg Met Leu Tyr Pro Gly
 210 215 220
 Ser Val Tyr Leu Leu Gln Lys Ala Leu Met Pro Ala Leu Leu Gln Gly
 225 230 235 240
 Gln Ala Arg Leu Val Glu Glu Cys Asn Gly Arg Arg Ala Lys Leu Leu
 245 250 255
 Ala Cys Asp Gly Asn Glu Ile Asp Thr Met Phe Val Asp Arg Arg Gly
 260 265 270
 Thr Ala Glu Pro Gln Gly Gln Lys Leu Val Ile Cys Cys Glu Gly Asn
 275 280 285
 Ala Gly Phe Tyr Glu Val Gly Cys Val Ser Thr Pro Leu Glu Ala Gly
 290 295 300
 Tyr Ser Val Leu Gly Trp Asn His Pro Gly Phe Ala Gly Ser Thr Gly
 305 310 315 320
 Val Pro Phe Pro Gln Asn Glu Ala Asn Ala Met Asp Val Val Val Gln
 325 330 335
 Phe Ala Ile His Arg Leu Gly Phe Gln Pro Gln Asp Ile Val Ile Tyr
 340 345 350
 Ala Trp Ser Ile Gly Gly Phe Thr Ala Thr Trp Ala Ala Met Ser Tyr
 355 360 365
 Pro Asp Val Ser Ala Met Ile Leu Asp Ala Ser Phe Asp Asp Leu Val
 370 375 380
 Pro Leu Ala Leu Lys Val Met Pro Asp Ser Trp Arg Gly Leu Val Thr
 385 390 395 400
 Arg Thr Val Arg Gln His Leu Asn Leu Asn Asn Ala Glu Gln Leu Cys
 405 410 415
 Arg Tyr Gln Gly Pro Val Leu Leu Ile Arg Arg Thr Lys Asp Glu Ile
 420 425 430
 Ile Thr Thr Thr
 435

<210> 5103

<211> 1982

<212> DNA

<213> Homo sapiens

<400> 5103

tttttttttt ttgacacaat tcagctttat ttttacttaa ttataacaat ttttaaaaaac
 60
 tccatgactt tgtgctatatt ctaatatatta aataaaaaaac atttcaaatt ttgcacaaat
 120
 aatttaggcc aatacataac tagatttgaa taaagtcaga tgaagcaata attcctcctc
 180
 tgtgtttgaa aggaatgagt gtggttacia agtcacagga tgagtccttg ggatctgggg
 240
 tgggagaagg ggtggatcaa gaatgacttg ggtttgtcac tccctagcag gctgagggcg
 300
 tgacacagca gctcgggtggc ggagaggtct attctagttt ctaacactcc aatgctaact
 360

ctgggctgga atcatccagg ctttgctgga agcacggggg taccattccc acagaatgag
 1020
 gccaatgcca tggatgtggt gggtcagttt gccatccacc gcctgggctt ccagccccag
 1080
 gacattgtca tctacgcctg gtccatcggc ggcttcaactg ccacgtgggc agccatgtcc
 1140
 taccagatg ttagtgccat gatcctggat gcctcctttg atgacctggt gcccttggcc
 1200
 ttgaaggcca tgccagacag ctggaggggc ctggtgacca ggaccgtgag gcagcatctc
 1260
 aatctaaaca acgaggagca gctgtgcaga taccagggtc ctgtactgct gatccggaga
 1320
 accaaggatg agatcatcac caccacgtga gtgcgtggga atctcgggcc tcaggaaccc
 1380
 cagagatggc caggaacttg tcccttctac ctctgcccac cagaaacctg ggtatctaga
 1440
 ccttctctcc taacctccag cccctccagg gtacattctt ctcaccccca gggttcctga
 1500
 ggacatcatg tccaaccgag gcaatgacct cctgctgaag ctctgcagc atcggtatcc
 1560
 ccgggtgatg gcagaggagg gtcttcgagt ggtgaggcag tgggtggagg cctcctcaca
 1620
 gctggaggaa gcctcaattt atagccgatg ggaggtggaa gaggactggt gtctgtctgt
 1680
 cctccgctcc taccaggcag aacacggggc c
 1711

<210> 5102

<211> 436

<212> PRT

<213> Homo sapiens

<400> 5102

Met	Ala	Lys	Leu	Leu	Ser	Cys	Val	Leu	Gly	Pro	Arg	Leu	Tyr	Lys	Ile
1			5						10					15	
Tyr	Arg	Glu	Arg	Asp	Ser	Glu	Arg	Ala	Pro	Ala	Ser	Val	Pro	Glu	Thr
		20						25					30		
Pro	Thr	Ala	Val	Thr	Ala	Pro	His	Ser	Ser	Ser	Trp	Asp	Thr	Tyr	Tyr
		35					40					45			
Gln	Pro	Arg	Ala	Leu	Glu	Lys	His	Ala	Asp	Ser	Ile	Leu	Ala	Leu	Ala
	50					55					60				
Ser	Val	Phe	Trp	Ser	Ile	Ser	Tyr	Tyr	Ser	Ser	Pro	Phe	Ala	Phe	Phe
65				70					75					80	
Tyr	Leu	Tyr	Arg	Lys	Gly	Tyr	Leu	Ser	Leu	Ser	Lys	Val	Val	Pro	Phe
				85					90					95	
Ser	His	Tyr	Ala	Gly	Thr	Leu	Leu	Leu	Leu	Leu	Ala	Gly	Val	Ala	Cys
			100						105				110		
Leu	Arg	Gly	Ile	Gly	Arg	Trp	Thr	Asn	Pro	Gln	Tyr	Arg	Gln	Phe	Ile
		115					120						125		
Thr	Ile	Leu	Glu	Ala	Thr	His	Arg	Asn	Gln	Ser	Ser	Glu	Asn	Lys	Arg
		130				135					140				
Gln	Leu	Ala	Asn	Tyr	Asn	Phe	Asp	Phe	Arg	Ser	Trp	Pro	Val	Asp	Phe
145				150						155				160	
His	Trp	Glu	Glu	Pro	Ser	Ser	Arg	Lys	Glu	Ser	Arg	Gly	Gly	Pro	Ser

<400> 5100

Ala Cys Arg Arg Ala Arg Val Gly Glu Ala Asp Trp Val Leu Gly Leu
 1 5 10 15
 Cys Asp Glu Ala Gly Thr Pro Val Gly Leu Gly Leu Leu Leu Glu Leu
 20 25 30
 Gly Pro Ser Ala Arg Pro Pro Pro Thr Pro Thr Trp Thr Gly Pro Gly
 35 40 45
 Leu Gly Thr Leu Ser Cys Val Lys Glu Asn Lys Gly Lys Glu Thr Ser
 50 55 60
 Leu Cys Ala Pro Ser Leu Pro Asn Lys His Glu Ser Asp Val Leu Gln
 65 70 75 80
 Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
 85 90 95
 Lys Lys Lys Lys Lys Lys
 100

<210> 5101

<211> 1711

<212> DNA

<213> Homo sapiens

<400> 5101

ggacctgctg ctggaagagc agcggcccca gccggggcca tggcgaagct gctgagctgc
 60
 gtcctaggcc cccggctcta caaatctac cgggagaggg actctgaaag ggccccggcc
 120
 agcgtccctg agacgccaac ggcagtcact gccccccatt ccagctcctg ggatacgtac
 180
 tatcagcccc gtgccctgga gaaacatgct gacagcatcc tggcactggc ttcagtattc
 240
 tgggtccatct cttattactc ctctcccttc gccttcttct acttgtagag gaaagggttac
 300
 ttgagtttgt ccaaagtggg gccgttttct cactatgctg ggacattgct gctacttctg
 360
 gcaggtgtgg cctgcctccg aggcattggc cgctggacca acccccagta ccggcagttc
 420
 atcaccatct tgggaagcaac acatcggaac cagtcttcag aaaacaagag gcagcttgcc
 480
 aactacaact ttgacttccg gagctggcca gtcgacttcc actgggaaga acccagcagc
 540
 cggaaggagt ctcgaggggg cccttcccgc cgggggtgtg ccctgcttcg ccagagcccc
 600
 ctgcaccggg ggacagcaga caccctcttc aaccgggtta agaagctgcc ttgtcagatc
 660
 accagctacc tgggtggcgca caccctaggg cgccggatgc tgtatccagg ctctgtgtac
 720
 ctgctgcaga aggccctcat gcctgcgctg ctgcagggcc agggccgact ggtggaagag
 780
 tgtaatgggc gccgggcaaa gctgctggcc tgtgatggca atgagattga caccatgttt
 840
 gtggaccggc gggggacagc tgagccccag ggacagaagc tggatgatctg ctgtgagggg
 900
 aatgctgggt tttatgaggt gggctgcgtc tccacgcccc tggaagctgg atattcagtc
 960


```

      20      25      30
Pro Ser Phe Gln Pro Gln His Phe Gln Lys Ala Leu Phe Phe Leu Glu
      35      40      45
Thr Glu Ser Arg Cys Val Ser Gln Ala Gly Val Gln Arg Gly Asp Leu
      50      55      60
Ser Ser Leu Gln Pro Leu Pro Pro Gly Phe Lys Gln Phe Ser Cys Leu
65      70      75      80
Ser Leu Pro Ser Ser Trp Asp Tyr Arg Cys Val Pro Pro His Pro Ala
      85      90      95
Asn Phe Cys Ile Phe Ser Arg Asn Gly Val Ser Pro His Trp Pro Gly
      100      105      110
Trp Ser

```

<210> 5099

<211> 801

<212> DNA

<213> Homo sapiens

<400> 5099

```

ggggccggga agggacctgg ctggggaatg agaaaacctg gggccatcgt caaccagag
60
acttgggttt gcaggtgaag ggtatcgggc cgtccatccc tctagcatgc ttctcagcac
120
ttgcattctt acccactaga cttctgcact gaccagggg ctggagcgaa tcccagacca
180
gctcggctac ctggtactga gtgaagggtc agtgctggcg ggcagcaagt gtgaagacag
240
aaaaagatgg agccattaac agtcatctgg ggacctggag aatgatgagc aggcagccag
300
tgccatctct gagctggtca gcacagcctg cggtttccgg ctgcaccgcg gcatgaatgt
360
gcccttcaag cgctgtctg gtgtgtctct cctccagtgg tctttggaga acacacactg
420
ctggtgacgg tgtcaggaca gaggggtgtt gtggtgaaga ggcagaaccg aggtcgggag
480
ccattgatg tctgagcctg ccggaggggc agggtcggag aagcggattg ggtcctgggc
540
ctctgtgatg aggcaggcac acctgtcggc cttggcttgc tgctagaact agggccttct
600
gctcgccac ctcccacccc tacctggacg ggcccaggct tggggactct gagctgtgtt
660
aaggagaaca agggcaagga gacctcctt tgtgctcct cactccctaa taaacatgag
720
tctgatgttc tccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
780
aaaaaaaaaa aaaaaaaaaa a
801

```

<210> 5100

<211> 102

<212> PRT

<213> Homo sapiens

tgggggtgct cagccccact gtatcctgga caggctgggc cggcttgag gctggtctcc
 1860
 atggaggctc agaaggaaag tgtgcaagag caggtttaga agggaaacca agtcagggaa
 1920
 gggccccagc cggggctagt ggtctgttca ctgccagcg ggcactctca gcagcaccac
 1980
 gcagcactcc gcttcacatg gcatggcttg cagaagagat ggttggttcag ggggtagcag
 2040
 ccttggtccg tgggctcgac agacaggagg atcctgcagt cctcacacct gtagcaattt
 2100
 tcatggaagt ttcttcccat gcattcgatt ttgaaggcat ctttcccatc ccgagggatg
 2160
 atgggatttt cacagatgct gcagacgggg gcgaatttcc tgtagaagtc gtccaggcag
 2220
 tacacctcgt tctggctgcc cagggcaaag ctctcatccc caatgcaccg ggcgcaggtc
 2280
 acacacgtga agcaggaggg gtggaaggcc tggcccaggc ccctgatgat gtggtcccg
 2340
 accacctcgc cacacttgcc gcacctctcc agtgtgtcct ggtagcaggg ttcgcagagg
 2400
 ggtcgcccat ctttctggta gaagctctgc ccagccagct ggcggcggca ggtgtggcga
 2460
 ggtggtccgg gaccacatca tcagggccct gggccaggcc ttccaccct cctgcttcac
 2520
 gtgtgtgacc tgcgcccggt gcattgggga tgagagcttt gccctgggca gccagaacga
 2580
 ggtgtactgc ctggacgact tctacaggaa attcgcccc gtctgcagca tctgtgaaaa
 2640
 tcccatcatc cctcgggatg ggaaagatgc cttcaaaatc gaatgcatgg gaagaaactt
 2700
 ccatgaaaat tgctacaggt gtgaggactg caggatcctc ctgtctgtcg agcccacgga
 2760
 ccaaggctgc taccctctga acaaccatct cttctgcaag ccatgccatg tgaagcggag
 2820
 tgctgcgggg tgctgctgag agtgcccgt gggcagtga cagaccacta gccccggctg
 2880
 gggcccttcc ctgacttggg ttcccttctt aacctgctct tgcacacttt cttctgagc
 2940
 ctccatggag accagcctgc aagccggccc agcctgtcca ggatacagtg gggctgagca
 3000
 ccccaggcc ttccactcct ctaccctctg ggcaccagaa ggctcctgga ccatgagctt
 3060
 cacccccaga attc
 3074

<210> 5098

<211> 114

<212> PRT

<213> Homo sapiens

<400> 5098

Met Ala Val Pro Gln Leu Gly Pro Ile Pro Val His Val Arg Thr Lys

1

5

10

15

Gly Val Phe Ala Ile Met Leu Pro Thr Lys Ser Lys Glu Cys Trp Phe

gaaataacag aacaggaggc ctttggttat aacaattgtg gaggtggctc gtgaatgcag
240
aagttcggga ctccctgtc taggtcagg gcaagacgct gtggtctggg ccgaagcccc
300
tggggttcta cagagaagcc tgcccagtgc acggccccctg tggcattctc gtgggagcgt
360
gtgagacccc agggagggaa gcacattctg ttttaacttgt ccgtgccgta caaaatgtct
420
tagaagtgat aaagcaacaa tgatgattct cttcaaagg gaagaagaat cttccagggtg
480
tggtcttgag gacgcagagg ttacaacaca ggctgggctg cagggcccaa gtaggacttg
540
aggtcataac cagaggactg aaggacacc tgcctggca ccatactgga gaagtgcttg
600
tttgtgtttg ggggagaggg ggtgcatggc ccaagtcaag gctgaaggag gaacgcttg
660
cccctgcacc ctgttcccag catataccag gctctcacc catgcctgct gactcaacac
720
agcaccggg aggtgccgc agaaggcagg tcgggggatg ctgacatccc ggggtgtctg
780
cggaccaccc tctcctcttg ggtctgggccc ctggcccccac ttgaccac acattccagg
840
gcggggaagt ccatggctgt gcccactg ggtccattc ctgtacatgt gcgaaccaag
900
ggggtgtttg ctattatgct cccactaaa tcaaagaat gttggtccc atcatttcaa
960
cctcaacatt ttcaaaaagc actttttttt ttggagacag agtctcgctg tgtctcccag
1020
gctggagtgc agcggggtga tctcagctca ctgcaacctc tgccctctgg gttaagcaa
1080
ttctcctgcc tcagcctccc gagtagctgg gattacaggt gcgtgccacc acaccagct
1140
aatttttgta tttttagtag aaacgggggt tcaccacatt ggccaggctg gtcttgaact
1200
cctgacctca agtgatctgc ctgccttggc ctcccaaagt gctgggatta caggcatgag
1260
ccaccatgcc cggcctaaaa gcactttttt ttttttgag acggagtttc cctcttgtg
1320
cccaggctgg aatgcaatgg tgcaatctca nnctgcaacc tctgccttc agattgaagc
1380
aattctctg cctcagcttc ccagtagct gggattacag gcacctgcta ccatgcctgg
1440
ctaatttttg tatttttagt agagacaggg tttcaccatg ttggccaggc tggcttgaa
1500
ctctgacct caggatgac acccaccttg gcctcccaa gtgctgggat tacaagcgtg
1560
agccaccatg ccagcctct aaaaggcact ttttaaggga ccttgagtt tgcctcaa
1620
cagctcaacc ccacaggcga ggctggctc agcacccta ccagacagct agtcagtga
1680
aggggtccaa cctccccag ctttccctg gaagtggggc agggtcagca ggaattctg
1740
ggggtgaagc tcatggteca ggagccttct ggtgccaga gggtagagga gtggaaggcc
1800

tacagcttca atttcaaaa aaaaaaaagt ttacacgacc agtgagactg ctcgcaactt
 1920
 tcatcactta gcatatcctt ccacaacaca gtacagtaag tggactgcag ggtggcctgg
 1980
 tgctgagggt gatgggtgca gacgtacacc tgtccagggt caggctcagg ggcctcgctg
 2040
 gacccctccc accttcccca actgcctact ggctggcta ctggataggt cctattctgt
 2100
 acataatggg ggtttgttga cagggtggctt tatagcaagt actccaaaaa aggtaaaagg
 2160
 aatttcacaa gtttggcacg caaaggctgc acagatctaa agaaaggcct ttgtaaagg
 2220
 gaatgcaaac
 2230

<210> 5096
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 5096
 Met Ala Leu Ser Arg Arg Gly Gly Pro Thr Ala Leu Leu Pro Gly Gln
 1 5 10 15
 Pro Glu Glu Glu Glu Ala Gly Cys Leu Phe Gly Gly Ser Phe Ser Leu
 20 25 30
 Gly Ile Pro Glu Ala Val Glu Gln His Leu Tyr Glu Met Leu Pro Glu
 35 40 45
 Gln Gln His Phe Pro Val Gly Thr Ala Pro Gly Asn Pro Val Pro Ser
 50 55 60
 Glu Gln Gly Gly Arg Thr His Pro Ser Leu Ile Arg Ile Trp Ala Arg
 65 70 75 80
 Arg Ala Gln Gln Gly Arg Leu Leu Arg Leu Pro Thr Ser Gln His Arg
 85 90 95
 Leu Ser Gly Leu Asn Pro Ser Val Leu Phe Pro Ser Trp Leu Ile Gly
 100 105 110
 Arg Pro Phe Ala Gly Thr His Cys Phe Asn Leu Thr Leu Pro Pro Pro
 115 120 125
 Ala Thr Leu Leu His Thr Pro Leu Arg Ser Ala Ser Leu Pro Cys Gln
 130 135 140
 Pro Phe Asn Lys Ser Tyr Ala Gln Met
 145 150

<210> 5097
 <211> 3074
 <212> DNA
 <213> Homo sapiens

<400> 5097
 tttttttttt tttttttttt tttttttttt tttttttttt ttttctaaca cttatgcatt
 60
 tattttcatg tgtaagaaga aaaacataac tagcacgtga acatgactgc atggatacac
 120
 ggctcagcac gaggctaaag tcagaagtga gtgaaaacaa aatagcatgt tgatttaagt
 180

acttggtaaa cagtgtgtgt ttaatccagc ctctgcctct gactaccttt aagaccagga
300
ctcgaagcag agtgagaggc ctccctccac ccacctcggg gcgagtgaag acacagctta
360
cagaggcggt caaagtagtg acgcagtgag gtctgaatga acacggagga ttttattact
420
caccattaat ggtagtgaag tgcccttcgg tggataccat caggtgaggt agggaagaca
480
ttccagagga aatctgttaa tggggcaacg tttttatttc tgtacattta catacaaatt
540
ttccccaag gtacaacaga tgcgacacca tgcagacacg cagctgtgaa cgacagttca
600
gaactcagcg taagcttggt ctatgaacga gcaccgtcag agaattccca cccacacgta
660
cagaaacaca gtttttatat tacaacctca aggacagagg gagggaagtg ttcgccgcta
720
gacatgacac accatactgc ttttccaaaa cacacgggac atgaaagcga ggtggtgcct
780
tctagacgag aggacagctg tagtgtgggc ctcccccgca catgcgatac ctcgggccgg
840
gcggtgtgac gtcacaggcc cacttaaggc acttgacgtt tgggattgct catttggtc
900
taggaagtgg tgggtgtctga gtgcgatact tcccttacga ggtttgttt tgttttctt
960
ctgttctgta gccaaaccaa tttaccagcc cgtcttcag atgcaggtga tcttactct
1020
agtaaacaaa aacatgtaac ctttttctg tttctcttg gtgtaataa ttttagggca
1080
tttgataaga gtttgacttc agaaaaagaa caaagtgaag aaatgttcag ctccatctca
1140
ggtgttcaca tttgtgcata acttttattg aaaggctgac agggtaggct agcggaacgg
1200
aggggtgtgt ggaggagagt agcagggggt gggaggggtca agttgaaaca gtgggtgcct
1260
gcgaagggtc tccctattag ccaggaaggg aacagcacag aggggttcaa gcctgacaga
1320
cgggtgctggg aagtgggcag ccgtagcagc ctccctgct gagcccgcg ggcccagatg
1380
cgtatcaggc ttgggtgggt cctgccacct tgctcacttg gtaccggatt tcccggggct
1440
gtgcccacag ggaagtgttg ctgctctggc aacatttcac aaagggtgtg ctcaacagct
1500
tcaggtatcc ctaggctgaa gctgccacca aacaggcacc cggcctctc ctctcaggc
1560
tgccctggga ggagagctgt gggaccgct cgccggctga gagccattac ctgccgaccg
1620
tcggcaagtc agcctcactc acaccactg gactctgctc ccaagagccc aggctgtttt
1680
cctcaaagct agcctctttt ccagtcacg atggattagt cctgatggct gaagtgtga
1740
gcagtgtctt cggtggacca gttttttatt gtcatttgag gtggagatca gagatcatga
1800
ccagaagagt gtgagtgtg tcccttgcca ccaacttct agagatttcg ggcagcactc
1860

50	55	60
Pro Ser Leu Ser Tyr Thr Lys Trp Lys Cys Leu Leu Tyr Cys Asn Gly		
65	70	75
Val Leu Glu Pro Leu Tyr Leu Cys Pro Asn Gly Ala Arg Cys Ala Thr		80
	85	90
Trp Phe Gln Asp Pro Thr Arg Phe Thr Gly Thr Met Asp Ala Phe Val		95
	100	105
Lys Ile Val Arg His Glu Gly Thr Arg Thr Leu Trp Ser Gly Leu Pro		110
	115	120
Ala Thr Leu Val Met Thr Val Pro Ala Thr Ala Ile Tyr Phe Thr Ala		125
	130	135
Tyr Asp Gln Leu Lys Ala Phe Leu Cys Gly Arg Ala Leu Thr Ser Asp		140
145	150	155
Leu Tyr Ala Pro Met Val Ala Gly Ala Leu Ala Arg Leu Gly Thr Val		160
	165	170
Thr Val Ile Ser Pro Leu Glu Leu Met Arg Thr Lys Leu Gln Ala Gln		175
	180	185
His Val Ser Tyr Arg Glu Leu Gly Ala Cys Val Arg Thr Ala Val Ala		190
	195	200
Gln Gly Gly Trp Arg Ser Leu Trp Leu Gly Trp Gly Pro Thr Ala Leu		205
	210	215
Arg Asp Val Pro Phe Ser Val His Pro Pro Pro Gln Ala Leu Tyr Trp		220
225	230	235
Phe Asn Tyr Glu Leu Val Lys Ser Trp Leu Asn Gly Leu Arg Pro Lys		240
	245	250
Asp Gln Thr Ser Val Gly Met Ser Phe Val Ala Gly Gly Ile Ser Gly		255
	260	265
Thr Val Ala Ala Val Leu Thr Leu Pro Phe Asp Val Val Lys Thr Gln		270
	275	280
Arg Gln Val Ala Leu Gly Ala Met Glu Ala Val Arg Val Asn Pro Leu		285
	290	295
His Val Asp Ser Thr Trp Leu Leu Leu Arg Arg Ile Arg Ala Glu Ser		300
305	310	315
Gly Thr Lys Gly Leu Phe Ala Gly Phe Leu Pro Arg Ile Ile Lys Ala		320
	325	330
Ala Pro Ser Cys Ala Ile Met Ile Ser Thr Tyr Glu Phe Gly Lys Ser		335
	340	345
Phe Phe Gln Arg Leu Asn Gln Asp Arg Leu Leu Gly Gly		350
	355	360
		365

<210> 5095

<211> 2230

<212> DNA

<213> Homo sapiens

<400> 5095

tttttttttg gtataaatac tttattaaag aaatattgtc attttcggtta aaaaatacat

60

tagagaagag agttttgggt taccagtctt tcctcacaga atcacagtgt aagatattca

120

tttcttgacg tctctaggaa ccttcaggcc acggatcagc agaacatata cgaacaaggg

180

aaaaaaattc ctcttaattt tactgatggc cccccgtctc tcaggtgggc tgagagtggc

240

aggcacgagg gcaccaggac cctctggagc ggctccccg ccacctggt gatgactgtg
 540
 ccagctaccg ccactactt cactgcctat gaccaactga aggccttcct gtgtggtcga
 600
 gccctgacct ctgacctcta cgcacccatg gtggctggcg cgctggcccg cctgggcacc
 660
 gtgactgtga tcagccccct ggagcttatg cggacaaagc tgcaggctca gcatgtgtcg
 720
 taccggggagc tgggtgcctg tggtcgaact gcagtggctc aggggtggctg gcgctcactg
 780
 tggctgggct ggggccccac tgcccttcga gatgtgccct tctcagtga tccccaccc
 840
 caagccctgt actggttcaa ctatgagctg gtgaagagct ggctcaatgg gctcaggccg
 900
 aaggaccaga cttctgtggg catgagcttt gtggctggcg gcatctcagg gacgggtggct
 960
 gcagtgtga ctctaccctt tgacgtggta aagacccaac gccaggtcgc tctgggagcg
 1020
 atggaggctg tgagagtga cccctgcat gtggactcca cctggctgct gctgcggagg
 1080
 atccggggcg agtcgggcac caagggactc tttgcaggct tccttctcgc gatcatcaag
 1140
 gctgccccct cctgtgccat catgatcagc acctatgagt tcggcaaaag cttcttccag
 1200
 aggtgaacc aggaccggct tctgggcggc tgaaaggggc aaggaggcaa ggaccccgtc
 1260
 tctccacgg atggggagag ggcaggagga gaccagcca agtgctttt cctcagcact
 1320
 gagggagggg gctgtttcc cttccctccc ggcgacaagc tccagggcag ggctgtccct
 1380
 ctgggcggcc cagcacttcc tcagacacaa cttcttctg ctgtccagt cgtggggatc
 1440
 atcacttacc cccccccaa gttcaagacc aaatcttcca gctgccccct tcgtgtttcc
 1500
 ctgtgtttgc tgtagctggg catgtctcca ggaaccaaga agccctcagc ctggtgtagt
 1560
 ctcctgacc cttgttaatt ctttaagtct aaagatgatg aacttcaaaa aaaaaaaaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1662

<210> 5094

<211> 365

<212> PRT

<213> Homo sapiens

<400> 5094

Met Ala Asp Gln Asp Pro Ala Gly Ile Ser Pro Leu Gln Gln Met Val
 1 5 10 15
 Ala Ser Gly Thr Gly Ala Val Val Thr Ser Leu Phe Met Thr Pro Leu
 20 25 30
 Asp Val Val Lys Val Arg Leu Gln Ser Gln Arg Pro Ser Met Ala Ser
 35 40 45
 Glu Leu Met Pro Ser Ser Arg Leu Trp Ser Leu Ser Tyr Thr Lys Leu

```

385          390          395          400
Ala Lys Ser Arg Cys Gln Gly Tyr Trp Asn Glu Gly Arg Ala Val Ala
          405          410          415
Arg Gly Asp Arg Arg Leu Leu Thr Gly Gln Gln Leu Ala Gln Glu Ile
          420          425          430
Lys Asn Leu Ser Gly Trp Met Gly Arg Thr Gly Pro Gly Phe Thr Ser
          435          440          445
Pro Asp Glu Met Ala Ala Gln Leu His Asp Leu Arg Lys Val Glu Ala
          450          455          460
Ala Lys Arg Glu Phe Glu Glu Tyr Val Arg Gln Gln Asp Val Ala Thr
465          470          475          480
Lys Arg Ile Phe Ser Ala Leu Arg Val Leu Pro Asp Thr Met Arg Asn
          485          490          495
Leu Leu Ser Thr Gln Lys Asp Ala Ile Leu Ala Arg His Gly Val Ala
          500          505          510
Leu Leu Cys Lys Gly Arg Asp Gln Thr Leu Glu Ala Leu Glu Ala Glu
          515          520          525
Leu Gln Ala Thr Ala Lys Ala Phe Met Asp Ser Tyr Thr Met Arg Phe
530          535          540
Cys Gly His Leu Ala Ala Val Gly Gly Ala Val Gly Ala Gly Leu Met
545          550          555          560
Gly Leu Ala Gly Gly Val Val Gly Ala Gly Met Ala Ala Ala Ala Leu
          565          570          575
Ala Ala Glu Ala Gly Met Val Ala Ala Gly Ala Ala Val Gly Ala Thr
          580          585          590
Gly Ala Ala Val Val Gly Gly Gly Val Gly Ala Gly Leu Ala Ala Thr
          595          600          605
Val Gly Cys Met Glu Lys Glu Glu Asp Glu Arg Leu Leu Glu Gly Asp
610          615          620
Arg Glu Pro Leu Leu Gln Glu Glu
625          630

```

<210> 5093

<211> 1662

<212> DNA

<213> Homo sapiens

<400> 5093

```

nggctaggtg cgctgcgagc gcgcgcggac cgcgcacagg cggcggagcc ggtatgggccc
60
cgcctggccc tgggcgccgc gccgcacgag caccagccta gagccagggtt tggttttcag
120
gactgaagct tcaagatggc tgaccaggac cctgcgggca tcagccccct ccagcaaagt
180
gtggcctcag gcaccggggc tgtggttacc tctctcttca tgacaccctt ggacgtgggtg
240
aaggttcgcc tgcagtctca ggggccttcc atggccagcg agctgatgcc ttcctccaga
300
ctgtggagcc tctctatac caaattgccc tccctctcct ataccaaatg gaagtgcctc
360
ctgtattgca atgggtgtcct ggagcctctg tacctgtgcc caaatgggtgc ccgctgtgcc
420
acctggtttc aagaccctac ccgcttcact ggcaccatgg atgccttcgt gaagatcggtg
480

```


<211> 632

<212> PRT

<213> Homo sapiens

<400> 5092

```

Met Pro Arg Pro Ala Leu Ser Val Thr Ser Phe Cys His Arg Leu Gly
 1           5           10           15
Lys Arg Glu Arg Lys Gln Ser Phe Met Gly Asn Ser Gly Asn Ser Trp
          20           25           30
Ser His Thr Pro Phe Pro Lys Leu Glu Leu Gly Leu Gly Pro Gln Pro
          35           40           45
Met Ala Pro Arg Glu Leu Pro Thr Cys Ser Ile Cys Leu Glu Arg Leu
 50           55           60
Arg Asp Pro Ile Ser Leu Asp Cys Gly His Asp Phe Cys Ile Arg Cys
 65           70           75           80
Phe Ser Thr His Arg Leu Pro Gly Cys Glu Pro Pro Cys Cys Pro Glu
          85           90           95
Cys Arg Lys Ile Cys Lys Gln Lys Arg Gly Leu Arg Ser Leu Gly Glu
          100          105          110
Lys Met Lys Leu Leu Pro Gln Arg Pro Leu Pro Pro Ala Leu Gln Glu
          115          120          125
Thr Cys Pro Val Arg Ala Glu Pro Leu Leu Leu Val Arg Ile Asn Ala
          130          135          140
Ser Gly Gly Leu Ile Leu Arg Met Gly Ala Ile Asn Arg Cys Leu Lys
          145          150          155          160
His Pro Leu Ala Arg Asp Thr Pro Val Cys Leu Leu Ala Val Leu Gly
          165          170          175
Glu Gln His Ser Gly Lys Ser Phe Leu Leu Asn His Leu Leu Gln Gly
          180          185          190
Leu Pro Gly Leu Glu Ser Gly Glu Gly Gly Arg Pro Arg Gly Gly Glu
          195          200          205
Ala Ser Leu Gln Gly Cys Arg Trp Gly Ala Asn Gly Leu Ala Gly Gly
          210          215          220
Ile Trp Met Trp Ser His Pro Phe Leu Leu Gly Lys Glu Gly Lys Lys
          225          230          235          240
Val Ala Val Phe Leu Val Asp Thr Gly Asp Ala Met Ser Pro Glu Leu
          245          250          255
Ser Arg Glu Thr Arg Ile Lys Leu Cys Ala Leu Thr Thr Met Leu Ser
          260          265          270
Ser Tyr Gln Ile Leu Ser Thr Ser Gln Glu Leu Lys Asp Thr Asp Leu
          275          280          285
Asp Tyr Leu Glu Met Phe Val His Val Ala Glu Val Met Gly Lys His
          290          295          300
Tyr Gly Met Val Pro Ile Gln His Leu Asp Leu Leu Val Arg Asp Ser
          305          310          315          320
Ser His Pro Asn Lys Ala Gly Gln Gly His Val Gly Asn Ile Phe Gln
          325          330          335
Arg Leu Ser Gly Arg Tyr Pro Lys Val Gln Glu Leu Leu Gln Gly Lys
          340          345          350
Arg Ala Arg Cys Cys Leu Leu Pro Ala Pro Gly Arg Arg Arg Met Asn
          355          360          365
Gln Gly His Ala Ser Pro Gly Gly Asp Thr Asp Asp Phe Arg His
          370          375          380
Leu Leu Gly Ala Tyr Val Ser Asp Val Leu Ser Ala Ala Pro Gln His

```

ctgccagaca ccatgcggaa cctcctctcc acccagaaag atgccattct ggccccccat
1680
gggtgtggcct tactctgcaa ggggagagat cagaccttgg aggcactgga agctgagctg
1740
caggccacgg ccaaggcctt catggactcc tacaegatgc gcttctgtgg ccacctagct
1800
gctgtggggg gtgctgtggg ggccgggctc atgggcctgg cagggggcgt ggtgggtgct
1860
ggcatggcag cagctgcact ggctgcagag gctgggatgg tggctgctgg agctgccgtg
1920
ggggccacag gggccgctgt ggttgggggt ggcgtgggtg ctgggttggc tgccacagt
1980
ggctgcatgg agaaggagga ggatgagagg cttctggaag gggaccgaga gcccttctc
2040
caggaagagt aacagcccca ggaggtattg aaggacagga gagatgtcag gtggggatga
2100
agaagagggg caggtcgggg gaggtgatg ccagggattc caaggcaccg ccatgtactg
2160
cactgccctg gtcgaatget cgggtgtctg gtggcagctg agctgggact caaggtggct
2220
cttggaaacct gggaggcagc atctgggggc agtggataga acaccggcc tgtttctggt
2280
tgcagatggt tgccgatctg cccttgtcac agataggcta catcccaggg tttctggctg
2340
caagtgagac tccacctcc ccacctggct catttcccc atgacctgg attgtaggaa
2400
agttaagcag gcaccatcct ggaagtctac ccctaggtgg tcgagagacc tgttctttca
2460
cagatgtgag aagccccagg atgattgacc atggtgttca ggagcgggga gcactgatga
2520
gggtgctggg atgacaggaa ggaaggaaca ctgggcagaa ccagagagat gggacatggt
2580
agactgtggc ccagacccca gagcagagaa acttgttccc atgacccttc ccaaactg
2640
tccagcagga ctaagggtggc tttcccactc ctggcccaca gccccagaga gcctgtctgt
2700
gcatcctgaa ccactctttg ctgggcctcc gcaagggcct ctcttgggtc tgtgtcctt
2760
ttcaagcctg tttagatggg ggagtgccca tgccctctgt gaagtgccca aatgcgaaag
2820
aataaacact tttcttgcac tctgagctaa gccagacagc ctttatacta gattctatca
2880
aaatcttgca aaggaaaaca aaatgaacaa cttctaccct taaacacatc ctttctcccc
2940
tgggcttgta agaagatgca gcttgatgca gctcctcaaa caccaggccc cctgggaact
3000
gggggtgctg gagttctccc tctgggggac agaaaatctg actactagga agacttctag
3060
gctatgaaac tgacttctag gctatgaaac ttacagggtg tgggtgggca cattatcct
3120
tattttatga aaaataaaat gtgtgtatgt
3150

<210> 5092

ggactcaggt cctcggggat accatccccc gacctcacct tccacctacc gcagcctgct
60
agcctttccg ggagaaaagg catccttacc tctggttgaa ggtctcgggg cctccccctc
120
tgcacccgga ccctctcccc atcccagcct cccatgccaa ggcccgcctt gtcagtcaact
180
tccttttgtc atcggcttgg caaacgggag agaaaacaga gttcatggg aaacagcggc
240
aacagttagt cccatacacc tttccccaag ttggagctag gcctggggcc ccagcccatg
300
gcgccccggg agctccctac ctgtccatc tgcctggaga ggttgcgcga ccccatctcg
360
ctggactgtg gccacgactt ctgcatacgg tgcttcagca cacaccgtct cccgggctgt
420
gagccgccct gctgtcctga gtgccggaag atatgcaagc agaagagggg cctccggagc
480
ctgggcgaga agatgaagct cctgccgcag cggccgctgc ccctgcact gcaggagacg
540
tgtcctgtga gggcggagcc gctgctgctg gttcgcacat atgcctctgg gggcctcatc
600
cttaggatgg gggccatcaa ccgctgcctg aagcaccctc tggccaggga caccacagtc
660
tgccctctcg ctgtcctggg ggagcagcac tcagggaagt ccttcctcct caaccatttg
720
cttcagggct tgccgggcct ggagtctggt gagggcggcc ggccaagagg aggagaggca
780
tccctgcagg gctgcaggtg gggcgccaat ggcctcgccg ggggcatatg gatgtggagc
840
cacccttctt tgctggggaa agaagggaag aagggtggcg tggtcctggt ggacacaggg
900
gatgccatga gccctgagct gagcaggga acaaggatca agctctgtgc tctcaccacg
960
atgctgagct cctaccagat cctcagcacc tcccaggagc tgaaggatac agacctggac
1020
tatctggaga tgtttgtcca cgtggccgag gtgatgggca agcattatgg gatggtgcc
1080
atccagcatc tggacctctt agttcgtgac tcatcccacc ccaacaaggc agggcagggg
1140
catgtaggca acatcttcca gagattgtct ggcagatacc ccaagggtgca ggagctgctg
1200
caagggaagc gagcccgttg ctgcctcttg cctgccccag ggaggcggcg gatgaaccaa
1260
ggccatgcaa gccctggttg tgacacagat gatgacttcc gccaccttct gggggcctac
1320
gtctcagatg tgctgagtgc gggccccag cagcctaaga gccgctgcca ggggtactgg
1380
aacgaggggc gcgccgtggc caggggggac agacgcctac tcacggggca gcagctagct
1440
caggaaatca agaacctctc aggatggatg gggaggacag ggcccggttt cacctctccg
1500
gatgagatgg ctgctcagct gcacgacctg aggaagggtg aagctgccaa gagggagtgc
1560
gaggagtatg tgaggcagca ggacgtagcc accaagcgca tattctctgc gctgcgggtc
1620

cgccatggct cagggcctaa catcatcctc acaggggact cctctccagg tttctctaag
 120
 gagattgcag cagccctggc cggagtgcct ggctttgagg tgtcagcagc tggattggag
 180
 ctagggttg ggctagaaga tgagctgcgc atggagccac tgggcctgga agggctaacc
 240
 atgctgagt acccctgtgc cctgctgcct gatcctgctg tggaggagtc attccgcagt
 300
 gaccggctcc aatgagggca cctcatcacc atccctcttc ttggcccat ccccaccac
 360
 cattccttcc ctcccttccc cctggcaggt agagactcta ctctctgtcc ccagatcctc
 420
 tttctagcat gaatgaagga tgccaagaat gagaaaaagc aaggggtttg tccaggtggc
 480
 ccctgaattc tgcgcaagg atgggcctgg gggaactcaa gggagggcct aaagcacttg
 540
 taactttgaa ccgtctgtct ggaggtcaga gcctgttgga aagcaggggt agaggggagc
 600
 cctggaagca gggcttttcc ggatgcctag ggggtggcag tgccagcccc tctcaccac
 660
 tcttccccct gcagtggagg agagagccag agtggatact attttttatt aaatatatta
 720
 ttatatgtta ataaaaaat catatcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 780
 aaaaaaaaaa aaa
 793

<210> 5090

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5090

Xaa	Asp	His	Ile	Ser	Asp	Asp	Pro	His	Thr	Phe	Asn	His	Gln	Asn	Leu
1				5					10					15	
Thr	His	Cys	Ser	Arg	His	Gly	Ser	Gly	Pro	Asn	Ile	Ile	Leu	Thr	Gly
			20					25					30		
Asp	Ser	Ser	Pro	Gly	Phe	Ser	Lys	Glu	Ile	Ala	Ala	Ala	Leu	Ala	Gly
		35					40					45			
Val	Pro	Gly	Phe	Glu	Val	Ser	Ala	Ala	Gly	Leu	Glu	Leu	Gly	Leu	Gly
		50				55					60				
Leu	Glu	Asp	Glu	Leu	Arg	Met	Glu	Pro	Leu	Gly	Leu	Glu	Gly	Leu	Asn
65					70					75				80	
Met	Leu	Ser	Asp	Pro	Cys	Ala	Leu	Leu	Pro	Asp	Pro	Ala	Val	Glu	Glu
				85					90					95	
Ser	Phe	Arg	Ser	Asp	Arg	Leu	Gln								
							100								

<210> 5091

<211> 3150

<212> DNA

<213> Homo sapiens

<400> 5091

115	120	125
His Cys Gln Asn Lys Val Cys Val Glu Pro Gln Gln Leu Cys Asp Gly		
130	135	140
Glu Asp Asn Cys Gly Asp Leu Ser Asp Glu Asn Pro Leu Thr Cys Gly		
145	150	155
Arg His Ile Ala Thr Asp Phe Glu Thr Gly Leu Gly Pro Trp Asn Arg		
165	170	175
Ser Glu Gly Trp Ser Arg Asn His Arg Ala Gly Gly Pro Glu Arg Pro		
180	185	190
Ser Trp Pro Arg Arg Asp His Ser Arg Asn Ser Ala Xaa Arg Leu Val		
195	200	205
Phe Tyr Gln Tyr Leu Ser Gly Ser Glu Ala Gly Cys Leu Gln Leu Phe		
210	215	220
Leu Gln Thr Leu Gly Pro Gly Ala Pro Arg Ala Pro Val Leu Leu Arg		
225	230	235
Arg Arg Arg Gly Glu Leu Gly Thr Ala Trp Val Arg Asp Arg Val Asp		
245	250	255
Ile Gln Ser Ala Tyr Pro Phe Gln Ile Leu Leu Ala Gly Gln Thr Gly		
260	265	270
Pro Gly Gly Val Val Gly Leu Asp Asp Leu Ile Leu Ser Asp His Cys		
275	280	285
Arg Pro Val Ser Glu Val Ser Thr Leu Gln Pro Leu Pro Pro Gly Pro		
290	295	300
Arg Ala Pro Ala Pro Gln Pro Leu Pro Pro Ser Ser Arg Leu Gln Asp		
305	310	315
Ser Cys Lys Gln Gly His Leu Ala Cys Gly Asp Leu Cys Val Pro Pro		
325	330	335
Glu Gln Leu Cys Asp Phe Glu Glu Gln Cys Ala Gly Gly Glu Asp Glu		
340	345	350
Gln Ala Cys Gly Thr Thr Asp Phe Glu Ser Pro Glu Ala Gly Gly Trp		
355	360	365
Glu Asp Ala Ser Val Gly Arg Leu Gln Trp Arg Arg Val Ser Ala Gln		
370	375	380
Glu Ser Gln Gly Ser Ser Ala Ala Ala Ala Gly His Phe Leu Ser Leu		
385	390	395
Gln Arg Ala Trp Gly Gln Leu Gly Ala Glu Ala Arg Val Leu Thr Pro		
405	410	415
Leu Leu Gly Pro Ser Gly Pro Ser Cys Glu Leu His Leu Ala Tyr Tyr		
420	425	430
Leu Gln Ser Gln Pro Arg Ala Gly Phe Val Gly Leu Val Asp Leu Asp		
435	440	445
Gly Pro Asp Gln Gln Xaa Ser Trp Gly Gly Gln Arg Asp Pro Glu Gly		
450	455	460

Leu

465

<210> 5089

<211> 793

<212> DNA

<213> Homo sapiens

<400> 5089

nctgaccaca tctccgaaga tccccacacc ttcaaccacc agaacttgac ccactgttcc
60

ggccgataca gctgggactg gggcggggga gccaccccct ctcgttaccc ccagccccct
 4080
 gtggaccaca ccctgggcac agaggcaggc cactttgcct tctttgaaac tggcgtgctg
 4140
 ggccccgggg gccgggcccgc ctggctgcgc agcagaccctc tgccggccac cccagccctcc
 4200
 tgccctccgt tctggtacca catgggtttt cctgagcact tctacaaggg ggagctgaag
 4260
 gtactgctgc acagtgtctc gggccagctg gctgtgtggg gcgcaggcgg gcatcgggcg
 4320
 caccagtggc tggaggccca ggtggaggta gccagtgcc aaggattcca gatcgtgttt
 4380
 gaagccactc tggcgggcca gccagccctg gggcccattg ccctggatga cgtggagtat
 4440
 ctggctgggc agcattgcc gacgctgcc cccagcccg ggaacacagc cgcacccggg
 4500
 tctgtgccag ctgtggttg cagtgcctc ctattgtc tgcctctggt gctgctggga
 4560
 cttgggggac ggcgctggct gcagaagaag gggagctgcc cctccagag caacacagag
 4620
 gccacagccc ctggctttga caacatcctt ttcaatgcgg atggtgtcac cctcccggca
 4680
 tctgtcacca gtgatccgta gaccaccca gacaaggccc cgcttctca cgtgacatcc
 4740
 agcacttggt cagaccctag ccagggaccg gacacctgcc ccgcccaggc tgggacaggc
 4800
 tgcaggtctc aggatatgct gaggcctggg cgttccctgc cctgtgctga ctctgttgct
 4860
 ctgtgaataa acaccctggc ccatgagggc agccccaaaa aaaaaaaaaa aaaaaaaaaa
 4920
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 4949

<210> 5088

<211> 465

<212> PRT

<213> Homo sapiens

<400> 5088

Gly	Ser	Gly	Thr	Thr	Arg	Pro	Leu	Glu	Val	His	Pro	Gly	Pro	Pro	Arg
1				5					10				15		
Leu	Val	Gly	Gly	Ala	Gln	Gly	Glu	Gly	Gly	Trp	Ala	Ala	Gly	Asp	Lys
		20					25				30				
Gln	Gly	Arg	Ser	Cys	Pro	Gly	Thr	Pro	Asp	Ile	Ala	Asp	Val	Ala	Glu
		35					40				45				
Leu	Arg	Val	Glu	Leu	Thr	His	Gly	Ala	Glu	Thr	Leu	Thr	Leu	Trp	Gln
	50					55				60					
Ser	Thr	Gly	Pro	Trp	Xaa	Pro	Trp	Xaa	Trp	Gln	Glu	Leu	Ala	Val	Thr
65				70				75					80		
Thr	Gly	Arg	Ile	Arg	Gly	Asp	Phe	Arg	Val	Thr	Phe	Ser	Ala	Thr	Arg
			85					90					95		
Asn	Ala	Thr	His	Arg	Gly	Ala	Val	Ala	Leu	Asp	Asp	Leu	Glu	Phe	Trp
			100				105					110			
Asp	Cys	Gly	Leu	Pro	Thr	Pro	Gln	Ala	Asn	Cys	Pro	Pro	Gly	His	His

agaccagtct cggagggtgc caccctgcag ccgctgcctc ctgggccccg ggccccagcc
2460
ccccagcccc tgccgcccag ctgcgggtc caggattcct gcaagcaggg gcattctgcc
2520
tgcggggacc tgtgtgtgcc cccggaacaa ctgtgtgact tcgaggagca gtgcgcaggg
2580
ggcgaggacg agcaggcctg tggcaccaca gactttgagt cccccgaggc tgggggctgg
2640
gaggacgcca gcgtggggcg gctgcagtgg cggcgtgtct cagcccagga gagccagggg
2700
tccagtgcag ctgctgctgg gcaacttctg tctctgcagc gggcctgggg gcagctaggc
2760
gctgaggccc gggtctcac accctctctt ggcccttctg gccccagctg tgaactccac
2820
ctggcttatt atttacagag ccagccccga gctggatttg tcggtttggg ggacttggat
2880
ggcctgacc agcagnggag ctggggtgga caacgtgacc ctgagggact gtagccccac
2940
agtgaccacc gagagagaca gaggttctct ctgcccaccc tcaactccac ctgggtgctc
3000
cccttacact cctccaggga ccccgagct tccacctct cagggtctct gagggggagg
3060
ggagaaggtg tgtgacgcca cctggcccc cccccagagg tctcctgtaa ctttgagcgg
3120
gacacatgca gctggtaccc aggccacctc tcagacacac actggcgctg ggtggagagc
3180
cgcgccctg accacgacca caccacaggg caaggccact ttgtgctcct ggacccccaca
3240
gacccctgg cctggggcca cagtgccac ctgctctcca ggccccaggt gccagcagca
3300
cccacggagt gtctcagctt ctggtaccac ctccatgggc cccagattgg gactctgcgc
3360
ctagccatga gacgggaagg ggaggagaca cacctgtggt cgcggtcagg caccagggc
3420
aaccgctggc acgaggcctg ggccaccctt tcccaccagc ctggctccca tgcccagtac
3480
cagctgctgt tcgagggcct ccgggacgga taccacggca ccatggcgct ggacgatgtg
3540
gccgtgcggc cgggccccct ctggggccct aattactgct cctttgagga ctgagactgc
3600
ggcttctccc ctggaggcca aggtctctgg aggcggcagg ccaatgcctc gggccatgct
3660
gcctggggcc cccaacaga ccataccact gagacagccc aagggcacta catggtggtg
3720
gacacaagcc cagacgcact accccggggc cagacggcct ccctgacctc caaggagcac
3780
aggccctgg cccagcctgc ttgtctgacc ttctggtacc acgggagcct ccgcagccca
3840
ggcaccctgc gggctctacct ggaggagcgc gggaggcacc aggtgctcag cctcagtgcc
3900
cacggcgggc ttgcctggcg cctgggcagc atggacgtgc aggccgagcg agcctggagg
3960
ngttcctgtg attttgagtc tggcctgtgt ggctggagcc acctggccgg gcccgccctg
4020

cggcagcctc tggtagcgtg ctgtccacca ggccttggag acaggctagc ctggccacag
840
aattaaacgt gttgccacac ctgccggctt ctgaactctg tccttggctt cctgcaccct
900
gcgtcaccac ctccgggggc cccagagacc taactaaagc agggaccctg tatctggcac
960
cggacagcac ctggctgctc aggacgaatg aatgacggcg tgatcctcca cagcctgact
1020
taaaggcacc ctgtgtggcc gcactgctcc ctctggccca accatgcctc tgtccagcca
1080
cctgctgccc gccttggctc tgttcctggg agccctggcc aggcctgtg caacttcgtg
1140
tgtgactgca gggactgctc agatgaggcc cagtgtggtt accacggggc ctgcccacc
1200
ctggcgccc ccttcgctg tgacttcgag caggaccct gcggctggcg ggacattagt
1260
acctcaggct acagctggct ccgagacagg gcaggggccg cactggaggg tcctgggct
1320
cactcagacc acacactggg caccgacttg ggtgaggcca gggcaagtct ctgtgcgcc
1380
ctgtcccaat accctcctg ctccctgccc cgtctcctga cctctcact gcgccaggct
1440
ggtacatggc cgttgaacc caccgaggga aagaggcatc caccgcagcc ctgctcgc
1500
caaccctgcg agaggcagcc tcctcttgca agctgaggct ctggtaccac gcggcctctg
1560
gaggtgcacc ctggaccccc aaggctcgtg gggggtgccc aaggggaggg cgggtgggca
1620
gctggggaca agcaggggcg cagctgccct gggaccctg acattgcaga tgtggctgaa
1680
ctgcgggtgg agctgacca tggcgagag accctgacc tgtggcagag cacaggggcc
1740
tgngggccct ggnnctggca ggagtggca gtgaccacag gccgcatccg gggtagctc
1800
cgagtgaact tctctgccac ccgaaatgcc accacaggg gcgctgtggc tctagatgac
1860
ctagagttct gggactgtgg tctgcccacc cccaggcca actgtcccc gggacaccac
1920
cactgccaga acaaggctctg cgtggagccc cagcagctgt gcgacgggga agacaactgc
1980
ggggacctgt ctgatgagaa ccactcacc tgtggccgcc acatagccac cgactttgag
2040
acaggcctgg gcccatggaa ccgctcgga ggctggctcc ggaaccaccg tgctgggtgt
2100
cctgagcgcc cctcctggcc acgctgtgac cacagccgga acagtgcann caggctggct
2160
ttctatcagt acctgagtgg gtctgaggct ggctgcctcc agctgttct gcagactctg
2220
gggcccggcg ccccccgggc cccgctctg ctgaggagg gccgagggga gctggggacc
2280
gcctgggtcc gagaccgtgt tgacatccag agcgctacc ccttcagat cctcctggcc
2340
gggcagacag gccgggggg cgctgtgggt ctggacgacc tcctcctgtc tgaccactgc
2400

625		630		635		640									
Pro	Glu	Phe	Val	Arg	Lys	His	Ile	Phe	Asn	Lys	His	Ala	Glu	Lys	Ile
				645					650					655	
Glu	Glu	Val	Lys	Lys	Glu	Val	Ala	Phe	Phe	Asn	Asn	Phe	Leu	Thr	Asp
			660					665					670		
Ala	Lys	Arg	Pro	Ala	Leu	Pro	Glu	Ile	Lys	Pro	Ala	Gln	Pro	Pro	Gly
	675						680					685			
Pro	Ala	Gln	Ile	Leu	Pro	Pro	Gly	Leu	Thr	Pro	Gly	Leu	Pro	Tyr	Pro
	690					695					700				
His	Gln	Thr	Pro	Gln	Gly	Leu	Met	Pro	Tyr	Gly	Gln	Pro	Arg	Pro	Pro
705				710						715				720	
Ile	Leu	Gly	Tyr	Gly	Ala	Gly	Ala	Val	Arg	Pro	Ala	Val	Pro	Thr	Gly
		725						730					735		
Gly	Pro	Pro	Tyr	Pro	His	Ala	Pro	Tyr	Gly	Ala	Gly	Arg	Gly	Asn	Tyr
		740					745					750			
Asp	Ala	Phe	Arg	Gly	Gln	Gly	Gly	Tyr	Pro	Gly	Lys	Pro	Arg	Asn	Arg
	755					760					765				
Met	Val	Arg	Gly	Asp	Pro	Arg	Ala	Ile	Val	Glu	Tyr	Arg	Asp	Leu	Asp
	770				775						780				
Ala	Pro	Asp	Asp	Val	Asp	Phe	Phe								
785					790										

<210> 5087

<211> 4949

<212> DNA

<213> Homo sapiens

<400> 5087

```

gcctaactgc cccgttccaa ggggtgccacc ggaccccgtt ggagaggaac ttctccgttg
60
gctgatttca tcaccaccca ttcccgatcc cacttttctt ttaagcgggt ctggcggacg
120
caaggcgtca aggaactgga ttgcgattgg tcagcacgtg cctcgggtcg cggtacaatt
180
ggctgaggcg ctgggccttg ggaagcattc cccgacggga ttggtcgtcg ctctcgaga
240
gcccgcctcc cgcagtacaa gcggcccccg ggtcgggttg gaggagggga ctccgggagg
300
aggaacatgg cgggtggcga cctcgtcttc attcctgatg tggacatcga ctccgacggc
360
gtcttcaagt atgtgctgat ccgagtccac tcggctcccc gctccggggc tccggtgca
420
gagagcaagg agatcggtcg cggctacaag tgggctgagt accatgcgga catctacgac
480
aaagtgtcgg gcgacatgca gaagcaaggc tgcgactgtg agtgtctggg cggcggggcg
540
atctcccacc agagtcagga caagaagatt cactgtacg gctattccat ggcctatggt
600
cctgcccagc acgccatttc aactgagaaa atcaaagcca agtaccgccga ctacgaggtc
660
acctgggcta acgacggcta ctgagcactc ccagcccggg gctgctgcc tccagcagcc
720
acttcagagc ccccgccctt gctgcaactc ctcttgagg gctggccctg cctgctctg
780

```

195	200	205
Ala Gly Leu Gly Asp Gly Glu Arg Lys Thr Asn Asp Lys Asp Glu Lys		
210	215	220
Lys Glu Asp Gly Lys Gln Ala Glu Asn Asp Ser Ser Asn Asp Asp Lys		
225	230	235
Thr Lys Lys Ser Glu Gly Asp Gly Asp Lys Glu Glu Lys Lys Glu Asp		
245	250	255
Ser Glu Lys Glu Ala Lys Lys Ser Ser Lys Lys Arg Asn Arg Lys His		
260	265	270
Ser Gly Asp Asp Ser Phe Asp Glu Gly Ser Val Ser Glu Ser Glu Ser		
275	280	285
Glu Ser Glu Ser Gly Gln Ala Glu Glu Glu Lys Glu Glu Ala Glu Glu		
290	295	300
Ala Leu Lys Glu Lys Glu Lys Pro Lys Glu Glu Glu Trp Glu Lys Pro		
305	310	315
Lys Asp Ala Ala Gly Leu Glu Cys Lys Pro Arg Pro Leu His Lys Thr		
325	330	335
Cys Ser Leu Phe Met Arg Asn Ile Ala Pro Asn Ile Ser Arg Ala Glu		
340	345	350
Ile Ile Ser Leu Cys Lys Arg Tyr Pro Gly Phe Met Arg Val Ala Leu		
355	360	365
Ser Glu Pro Gln Pro Glu Arg Arg Phe Phe Arg Arg Gly Trp Val Thr		
370	375	380
Phe Asp Arg Ser Val Asn Ile Lys Glu Ile Cys Trp Asn Leu Gln Asn		
385	390	395
Ile Arg Leu Arg Glu Cys Glu Leu Ser Pro Gly Val Asn Arg Asp Leu		
405	410	415
Thr Arg Arg Val Arg Asn Ile Asn Gly Ile Thr Gln His Lys Gln Ile		
420	425	430
Val Arg Asn Asp Ile Lys Leu Ala Ala Lys Leu Ile His Thr Leu Asp		
435	440	445
Asp Arg Thr Gln Leu Trp Ala Ser Glu Pro Gly Thr Pro Pro Leu Pro		
450	455	460
Thr Ser Leu Pro Ser Gln Asn Pro Ile Leu Lys Asn Ile Thr Asp Tyr		
465	470	475
Leu Ile Glu Glu Val Ser Ala Glu Glu Glu Leu Leu Gly Ser Ser		
485	490	495
Gly Gly Ala Pro Pro Glu Glu Pro Pro Lys Glu Gly Asn Pro Ala Glu		
500	505	510
Ile Asn Val Glu Arg Asp Glu Lys Leu Ile Lys Val Leu Asp Lys Leu		
515	520	525
Leu Leu Tyr Leu Arg Ile Val His Ser Leu Asp Tyr Tyr Asn Thr Cys		
530	535	540
Glu Tyr Pro Asn Glu Asp Glu Met Pro Asn Arg Cys Gly Ile Ile His		
545	550	555
Val Arg Gly Pro Met Pro Pro Asn Arg Ile Ser His Gly Glu Val Leu		
565	570	575
Glu Trp Gln Lys Thr Phe Glu Glu Lys Leu Thr Pro Leu Leu Ser Val		
580	585	590
Arg Glu Ser Leu Ser Glu Glu Glu Ala Gln Lys Met Gly Arg Lys Asp		
595	600	605
Pro Glu Gln Glu Val Glu Lys Phe Val Thr Ser Asn Thr Gln Glu Leu		
610	615	620
Gly Lys Asp Lys Trp Leu Cys Pro Leu Ser Gly Lys Lys Phe Lys Gly		

agtggcaaga aattcaaggg tcctgagttt gtgcgcaaac atatcttcaa caagcatgca
 2400
 gagaaaattg aggaagtga aaaggaagtc gcgtttttta acaacttcct cactgatgct
 2460
 aagcgccag ctctgcctga gatcaagcca gccagccac ctggccccgc ccagatactc
 2520
 cccccagggt tgacccaggg actcccctac ccacaccaga ctccccaggg cctgatgccc
 2580
 tatggtcagc cccggccccc gatcttgggc tatggagctg gtgctgtccg ccctgcagtc
 2640
 cccacaggag gccctccata ccccatgcc ccgtatggtg ctggtcgagg gaactatgat
 2700
 gccttccgag gccagggagg ttatcctggg aaacctcgca acaggatggt tcgtggagac
 2760
 ccaagggcca ttgtggaata tcgggacctg gatgccccag acgatgttga tttcttttga
 2820
 gccgtcccc gttcctcagt cctgtatcat ccatacttgt actaccttgt cctatgaagc
 2880
 tctgagaatt tttgtacga tcagccttac tgctaataaa agcacttcca cagggaaaaa
 2940
 aaaaaaaaaa aaaaaaagtc gacg
 2964

<210> 5086

<211> 792

<212> PRT

<213> Homo sapiens

<400> 5086

Met	Ser	Thr	Ala	Leu	Thr	His	Thr	Thr	Val	Ala	Met	Arg	Cys	Pro	Met
1				5					10					15	
Leu	Xaa	Gly	Gly	Gly	Gly	Pro	Thr	Tyr	Gly	Pro	Pro	Gln	Pro	Trp	Gly
			20					25					30		
His	Pro	Asp	Val	His	Ile	Met	Gln	His	His	Val	Leu	Pro	Ile	Gln	Ala
			35				40					45			
Arg	Leu	Gly	Ser	Ile	Ala	Glu	Ile	Asp	Leu	Gly	Val	Pro	Pro	Pro	Val
			50			55					60				
Met	Lys	Thr	Phe	Lys	Glu	Phe	Leu	Leu	Ser	Leu	Asp	Asp	Ser	Val	Asp
65					70					75				80	
Glu	Thr	Glu	Ala	Val	Lys	Arg	Tyr	Asn	Asp	Tyr	Lys	Leu	Asp	Phe	Arg
			85					90					95		
Arg	Gln	Gln	Met	Gln	Asp	Phe	Phe	Leu	Ala	His	Lys	Asp	Glu	Glu	Trp
			100					105					110		
Phe	Arg	Ser	Lys	Tyr	His	Pro	Asp	Glu	Val	Gly	Lys	Arg	Arg	Gln	Glu
			115				120					125			
Ala	Arg	Gly	Ala	Leu	Gln	Asn	Arg	Leu	Arg	Val	Phe	Leu	Ser	Leu	Met
			130			135					140				
Glu	Thr	Gly	Trp	Phe	Asp	Asn	Leu	Leu	Leu	Asp	Ile	Asp	Lys	Ala	Asp
145					150					155				160	
Ala	Ile	Val	Lys	Met	Leu	Asp	Ala	Ala	Val	Ile	Lys	Met	Glu	Gly	Gly
			165					170					175		
Thr	Glu	Asn	Asp	Leu	Arg	Ile	Leu	Glu	Gln	Glu	Glu	Glu	Glu	Gln	
			180				185						190		
Ala	Gly	Lys	Pro	Gly	Glu	Pro	Ser	Lys	Lys	Glu	Glu	Gly	Arg	Ala	Gly

gattttccgga ggcaacagat gcaggatttc ttcctggcgc acaaagatga ggagtggttt
780
cggtctaagt accaccaga tgagggtggg aagcgtcggc aggaggcccg gggggccctg
840
caaaaccgac tgagggtcct cctgtccctc atggagactg gctggtttga taaccttctc
900
ctggacatag acaaagctga tgccattgtc aagatgctgg atgcagccgt gattaagatg
960
gaaggaggca cggagaatga tcttcgcctc ctggagcagg aggaggagga ggagcaggca
1020
ggaaagcctg gggagccag caagaaagaa gaaggacggg ctggagcagg cctaggggac
1080
ggggagcgca aaaccaacga caaggatgag aagaaggaag acggcaagca ggctgagaat
1140
gacagtctta atgatgacaa aacaaagaag tcggagggtg atggggacaa ggaagagaag
1200
aaagaagact ccgagaagga agccaaaaag agtagcaaga agcggaaccg gaagcacagt
1260
ggtgacgaca gctttgacga gggcagcgtg tcagagtctg agtcggagtc agagagcggc
1320
caggctgagg aggagaagga ggaggccgaa gaagcgctca aggagaagga gaagcccag
1380
gaagaagaat gggagaagcc caaggacgcc gcggggctgg agtgcaagcc gcggccgctg
1440
cataagacct gctccctctt catgcgcaac atcgcgccca acatctcccg ggccgagatc
1500
atctcccttt gtaaaaggta ccagggcttt atgcgggtgg cgctctcaga gcccagcca
1560
gagaggaggt ttttccgtcg tggctgggtg accttcgacc gcagtgttaa cattaagag
1620
atctgttga acctgcagaa catccgtctc cgggagtgtg agctgagccc tgggtgtgaac
1680
agggacctga cccggcgctg tcgcaacatc aacggcatca ccagcacaa gcagattgtg
1740
cgcaacgaca tcaagctggc ggccaagctg atccacacgc tggatgacag gacacagctt
1800
tgggcctcag aaccagggac gcctccctg cccacgagcc tgccctcgca aaaccgac
1860
ttgaagaata tcaccgacta cctgatcgag gaagtaagcg ccgaggagga ggagctgctg
1920
gggagcagcg ggggcgctcc tcctgaggag cctcctaagg aagggaaccc ggcagagatc
1980
aacgtggagc gggatgagaa gttgattaag gtcttggaca agctcctcct ttacctgcgc
2040
atcgtgcatt ccttgatta ttacaacacc tgtgagtacc ccaacgagga cgagatgccc
2100
aatcgctgtg ggatcatcca cggtcggggg cccatgccac ccaaccgcat cagtcacggg
2160
gaagtgtggt agtggcagaa gacttttgag gagaagctca cgccgttgct gagtgtgcgg
2220
gagtcactct cagaggaaga ggcccagaag atggggcgca aagaccaga gcaggaagtg
2280
gagaagtctg tcacctcaa cagcaggaa ctgggcaagg ataagtggct gtgtcctctc
2340

210		215		220											
Thr	Pro	Lys	Cys	Glu	Asp	Cys	Gln	Ser	Leu	Val	Lys	Pro	Asp	Ile	Val
225					230					235					240
Phe	Phe	Gly	Glu	Ser	Leu	Pro	Ala	Arg	Phe	Phe	Ser	Cys	Met	Gln	Ser
			245						250					255	
Asp	Phe	Leu	Lys	Val	Asp	Leu	Leu	Leu	Val	Met	Gly	Thr	Ser	Leu	Gln
		260					265					270			
Val	Gln	Pro	Phe	Ala	Ser	Leu	Ile	Ser	Lys	Ala	Pro	Leu	Ser	Thr	Pro
	275						280					285			
Arg	Leu	Leu	Ile	Asn	Lys	Glu	Lys	Ala	Gly	Gln	Ser	Asp	Pro	Phe	Leu
290					295						300				
Gly	Met	Ile	Met	Gly	Leu	Gly	Gly	Gly	Met	Asp	Phe	Asp	Ser	Lys	Lys
305				310						315				320	
Ala	Tyr	Arg	Asp	Val	Ala	Trp	Leu	Gly	Glu	Cys	Asp	Gln	Gly	Cys	Leu
			325					330					335		
Ala	Leu	Ala	Glu	Leu	Leu	Gly	Trp	Lys	Lys	Glu	Leu	Glu	Asp	Leu	Val
	340						345					350			
Arg	Arg	Glu	His	Ala	Ser	Ile	Asp	Ala	Gln	Ser	Gly	Ala	Gly	Val	Pro
	355					360					365				
Asn	Pro	Ser	Thr	Ser	Ala	Ser	Pro	Lys	Lys	Ser	Pro	Pro	Pro	Ala	Lys
370					375					380					
Asp	Glu	Ala	Arg	Thr	Thr	Glu	Arg	Glu	Lys	Pro	Gln				
385			390					395							

<210> 5085

<211> 2964

<212> DNA

<213> Homo sapiens

<400> 5085

nactgcccacat ccccggttgt cccacttttg ttcgcctctc ttcggccctc tactcaagag
60
ctccgtctcc gtctcgccct cctcgaagtc ctctgcgcgc gcccgcgacc caggctcgccc
120
tgaaatctag cccgtccgag cgcgagtgca acggccgagg ccgcaccaag gcccctcag
180
accgtgccat ggggtgacagt gatgacgagt acgatcgaag ggcgaggac aagttcagaa
240
gagagcgcag cgactacgac cgttcccgcg agagagatga aagacgtcga ggggacgatt
300
ggaatgacag agagtgggac cgtggccgtg agcgccgtag tcgggggtgaa tatcgggact
360
atgaccggaa tcggcgagag cgcttctcgc cacctcgcca cgaactcagc ccgccacaga
420
agcgcatgag gagagactgg gatgagcaca gctctgaccc ataccacagt ggctatgaga
480
tgccctatgc tngggggggg tggggggcca acttatggcc cccctcagcc ctggggccac
540
cctgacgtcc acatcatgca gcaccatgtc ctgcctatcc aggccaggct gggcagcatt
600
gcagagattg acctgggtgt gccgcccgcg gtgatgaaga ccttcaagga gtttctcctc
660
tccttgatg actcgggtga tgagacggag gccgtcaagc gctataatga ctacaagctg
720

ggcgggatgt cgagctcctc agggacagct gagccccaac cgggcctggc cccctcttaa
 1320
 ccagcagttc ttgtctgggg agctcagaac atcccccaat ctcttacagc tccctcccca
 1380
 aaactggggt cccagcaacc ctggccccc accccagcaa atctctaaca cctcctagag
 1440
 gccaaaggctt aaacaggcat ctctaccagc cccactgtct ctaaccactc ctgggctaag
 1500
 gagtaacctc cctcatctct aactgcccc acggggccag ggctacccca gaacttttaa
 1560
 ctcttcacag acagggagct tcgggcccc actctgtctc ctgcccccg gggcctgtgg
 1620
 ctaagtaaac catacctaac ctacccagc gtgggtgtgg gcctctgaat ataaccaca
 1680
 cccagcgtag ggggagctct agccgggagg gctcccgagt ctctgccttc agtcccaaa
 1740
 gtgggtgggt ggcccccttc acgtgggacc cacttcccat gctggatggg cagaagacat
 1800
 tgcttattgg agacaaatta aaaacaaaaa caactaaca aaaaaaaaaa aaaaaa
 1856

<210> 5084

<211> 396

<212> PRT

<213> Homo sapiens

<400> 5084

Arg	Asp	Thr	Val	Val	Gly	Asp	Gly	Thr	Glu	Arg	Ser	Val	Thr	Ala	Ser
1				5					10					15	
Arg	Ala	Ser	Ala	Pro	Arg	Pro	Trp	Gln	Ser	Gln	Thr	Asp	Ser	Asp	Ser
			20					25					30		
Asp	Ser	Glu	Gly	Gly	Ala	Ala	Gly	Gly	Glu	Ala	Asp	Met	Asp	Phe	Leu
		35					40					45			
Arg	Asn	Leu	Phe	Ser	Gln	Thr	Leu	Ser	Leu	Gly	Ser	Gln	Lys	Glu	Arg
	50					55					60				
Leu	Leu	Asp	Glu	Leu	Thr	Leu	Glu	Gly	Val	Ala	Arg	Tyr	Met	Gln	Ser
65					70				75					80	
Glu	Arg	Cys	Arg	Arg	Val	Ile	Cys	Leu	Val	Gly	Ala	Gly	Ile	Ser	Thr
			85					90						95	
Ser	Ala	Gly	Ile	Pro	Asp	Phe	Arg	Ser	Pro	Ser	Thr	Gly	Leu	Tyr	Asp
			100					105					110		
Asn	Leu	Glu	Lys	Tyr	His	Leu	Pro	Tyr	Pro	Glu	Ala	Ile	Phe	Glu	Ile
		115					120					125			
Ser	Tyr	Phe	Lys	Lys	His	Pro	Glu	Pro	Phe	Phe	Ala	Leu	Ala	Lys	Glu
	130					135					140				
Leu	Tyr	Pro	Gly	Gln	Phe	Lys	Pro	Thr	Ile	Cys	His	Tyr	Phe	Met	Arg
145					150					155				160	
Leu	Leu	Lys	Asp	Lys	Gly	Leu	Leu	Leu	Arg	Cys	Tyr	Thr	Gln	Asn	Ile
			165					170						175	
Asp	Thr	Leu	Glu	Arg	Ile	Ala	Gly	Leu	Glu	Gln	Glu	Asp	Leu	Val	Glu
		180						185					190		
Ala	His	Gly	Thr	Phe	Tyr	Thr	Ser	His	Cys	Val	Ser	Ala	Ser	Cys	Arg
		195					200					205			
His	Glu	Tyr	Pro	Leu	Ser	Trp	Met	Lys	Glu	Lys	Ile	Phe	Ser	Glu	Val

65		70		75		80									
Trp	Gly	Asn	Asn	Asn	Glu	Ile	Leu	Ser	Gly	Leu	Asp	Met	Glu	Glu	Gly
		85		90		95									
Lys	Glu	Gly	Gly	Thr	Trp	Leu	Gly	Ile	Ser	Thr	Arg	Gly	Lys	Leu	
		100		105		110									

<210> 5083

<211> 1856

<212> DNA

<213> Homo sapiens

<400> 5083

```

nnggccacta ggcacgggac agagcagtcg gtgacaggac agagcagtcg gtgacgggac
60
acagtgggtg gtgacgggac agagcgggtc gtgacagcct caagggcttc agcaccgcgc
120
ccatggcaga gccagaccga ctcagattca gactctgagg gaggagccgc tgggtggagaa
180
gcagacatgg acttcctgcg gaacttattc tccagacgc tcagcctggg cagccagaag
240
gagcgtctgc tggacgagct gaccttggaa ggggtggccc ggtacatgca gagcgaacgc
300
tgtcgcagag tcactgtttt ggtgggagct ggaatctcca catccgcagg catccccgac
360
tttcgtcttc catccaccgg cctctatgac aacctagaga agtaccatct tccctaccca
420
gaggccatct ttgagatcag ctatttcaag aaacatccgg aacccttctt cgccctcgcc
480
aaggaactct atcctgggca gttcaagcca accatctgtc actacttcat gcgcctgctg
540
aaggacaagg ggtactcct gcgctgtac acgcagaaca tagataccct ggagcgaata
600
gccgggctgg aacaggagga cttgggtggag gcgcacggca ctttctacac atcacactgc
660
gtcagcgcca gctgccggca cgaatacccg ctaagctgga tgaaagagaa gatcttctct
720
gaggtgacgc ccaagtgtga agactgtcag agcctggtga agcctgatat cgtctttttt
780
ggtgagagcc tccagcgcg tttcttctcc tgtatgcagt cagacttcct gaaggtggac
840
ctcctcctgg tcattgggtac ctcttgtag gtgcagccct ttgcctccct catcagcaag
900
gcacccctct ccacccctcg cctgctcatc aacaaggaga aagctggcca gtcggaccct
960
ttcctgggga tgattatggg cctcggagga ggcattgact ttgactcaa gaaggcctac
1020
agggacgtgg cctggctggg tgaatgcgac cagggtgccc tggcccttgc tgagctcctt
1080
ggatggaaga aggagctgga ggacctgtc cggagggagc acgccagcat agatgcccag
1140
tcggggggcg gggccccaa cccagcact tcagcttccc ccaagaagtc cccgccacct
1200
gccaggacg aggccaggac aacagagagg gagaaacccc agtgacagct gcatctccca
1260

```

```
<210> 5081
<211> 561
<212> DNA
<213> Homo sapiens
```

```
<210> 5082
<211> 111
<212> PRT
<213> Homo sapiens
```

4263

ccgggtcggg tgggaggagg ggactccggg aggaggaaca tggcgggtggc ggacctcgct
 360
 ctatttcctg atgtggacat cgactccgac ggcgtcttca agtatgtgct gatccgagtc
 420
 cactcggctc cccgctccgg ggctccggct gcagagagca aggagatcgt gcgaggctac
 480
 aagtgggctg agtaccatgc ggacatctac gacaaagtgt cgggcgacat gcagaagcaa
 540
 ggctgcgact gtgagtgtct gggcggcggg cgcactctcc accagagtca ggacaagaag
 600
 attcagctgt acggctattc catggtgagc cgcagccccg tcccgccttg ccggaggccc
 660
 cagtaccagc ttcgaggccc acctgagcct gctgccctga cccgtggccc cagctgagca
 720
 cgcaggcttc ctggggttct cccagggtcg gcggcagagc cctccctcca gggcccattg
 780
 tgttcctgca ttcccccatg gagcacacgc cagacctgag ggggtggacg gacaccccca
 840
 ggcatggccg gctgtctcct ctccctgcct tgggaggcct tgctgggctc tagctgtcct
 900
 ccagcacttt gggccctggg cccccagagg cagtcagtac ctgggtggag ctacagagtcc
 960
 ccacctgtgc tcttcacaaa aaccaccagc agatgagacc cacgtgcgtc cctctgggcg
 1020
 cctcaggccc caggatccac catcaaggcc tatggtcctg cccagcacgc catttcaact
 1080
 gagaaaatca aagccaagta ccccgactac gaggtcacct gggctaacga cggctactga
 1140
 gcactcccag cccggggcct gctgcctcca gcagccactt cagagccccc gcctttgcct
 1200
 gcactcctct tgcagggtg gcctgcctg ctctgcggc agcctctggt gacgtgctgt
 1260
 ccaccaggcc ttggagacag gctagcctgg ccacagaatt aaacgtgttg ccacacaaaa
 1320
 aaaaaaaaaa aaaaaaaaa
 1338

<210> 5080

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5080

Gly Ala Gly Pro Trp Glu Ala Phe Pro Asp Gly Ile Gly Arg Arg Ser
 1 5 10 15
 Arg Arg Ala Arg Leu Pro Gln Tyr Lys Arg Pro Pro Gly Arg Val Gly
 20 25 30
 Gly Gly Asp Ser Gly Arg Arg Asn Met Ala Val Ala Asp Leu Ala Leu
 35 40 45
 Ile Pro Asp Val Asp Ile Asp Ser Asp Gly Val Phe Lys Tyr Val Leu
 50 55 60
 Ile Arg Val His Ser Ala Pro Arg Ser Gly Ala Pro Ala Ala Glu Ser
 65 70 75 80
 Lys Glu Ile Val Arg Gly Tyr Lys Trp Ala Glu Tyr His Ala Asp Ile

260 265 270
 Ala Glu Met Asp Lys Val Lys Glu Glu Ala Met Glu Ile Leu Thr Ala
 275 280 285
 Arg Gln Lys Lys Ala Glu Glu Leu Lys Arg Leu Thr Asp Leu Ala Ser
 290 295 300
 Gln Met Ala Glu Met Gln Leu Ala Glu Leu Arg Ala Glu Ile Lys His
 305 310 315 320
 Phe Val Ser Glu Arg Lys Tyr Asp Glu Glu Leu Gly Lys Ala Ala Arg
 325 330 335
 Phe Ser Cys Asp Ile Glu Gln Leu Lys Ala Gln Ile Met Leu Cys Gly
 340 345 350
 Glu Ile Thr His Pro Lys Asn Asn Tyr Ser Ser Arg Thr Pro Cys Ser
 355 360 365
 Ser Leu Leu Pro Leu Leu Asn Ala His Ala Ala Thr Ser Gly Lys Gln
 370 375 380
 Ser Asn Phe Ser Arg Lys Ser Ser Thr His Asn Lys Pro Ser Glu Gly
 385 390 395 400
 Lys Ala Ala Asn Pro Lys Met Val Ser Ser Leu Pro Ser Thr Ala Asp
 405 410 415
 Pro Ser His Gln Thr Met Pro Ala Asn Lys Gln Asn Gly Ser Ser Asn
 420 425 430
 Gln Arg Arg Arg Phe Asn Pro Gln Tyr His Asn Asn Arg Leu Asn Gly
 435 440 445
 Pro Ala Lys Ser Gln Gly Ser Gly Asn Glu Ala Glu Pro Leu Gly Lys
 450 455 460
 Gly Asn Ser Arg His Glu His Arg Arg Gln Pro His Asn Gly Phe Arg
 465 470 475 480
 Pro Lys Asn Lys Gly Gly Ala Lys Asn Gln Glu Ala Ser Leu Gly Met
 485 490 495
 Lys Thr Pro Glu Ala Pro Ala His Ser Glu Lys Pro Arg Arg Gln
 500 505 510
 His Ala Ala Asp Thr Ser Glu Ala Arg Pro Phe Arg Gly Ser Val Gly
 515 520 525
 Arg Val Ser Gln Cys Asn Leu Cys Pro Thr Arg Ile Glu Val Ser Thr
 530 535 540
 Asp Ala Ala Val Leu Ser Val Pro Ala Val Thr Leu Val Ala
 545 550 555

<210> 5079

<211> 1338

<212> DNA

<213> Homo sapiens

<400> 5079

ggccctccctc gttgccccag cctcgcgggc cgcctaactg ccccggtcca aggggtgccac
 60
 cggacccccgc tggagaggaa cttctccgtt ggctgatttc atcaccaccc attcccgatt
 120
 ccacgtttcc tttaagcggg gctggcggag ccgcaaggcg gcaaggaact ggattgcgat
 180
 tggtcagcac gtgcctcggg cggcgggtaca attggctgag gcgctgggccc ttgggaagca
 240
 ttccccgacg ggattggteg tcgctctcgc agagcccgcc tcccgcagta caagcggccc
 300

tttcttttat tgttcttctt ttttctgtc atattccatt cttttagaac ttgaattgca
 2040
 ctgccatcca caaaggcttg cacggcttta tccacattaa aatcaaactg ttggagcacc
 2100
 aggactatctt cattattgct tttgttgga acaactgac taactgcata gatcttttcc
 2160
 ttgacattca catgagtatt gagttcagcc atcttgcttc tagcggaata ggccctggga
 2220
 atccacagca atgttctga aagcagcctg gtttctgaag agctctgaaa aatcaggcgc
 2280
 ggaaaaagtg ctggagctcg ggtcagccct tggaaaccgc accaaccgcg ggtgttccgc
 2340
 cgcctcctct gc
 2352

<210> 5078

<211> 558

<212> PRT

<213> Homo sapiens

<400> 5078

Met	Ala	Glu	Leu	Asn	Thr	His	Val	Asn	Val	Lys	Glu	Lys	Ile	Tyr	Ala	1	5	10	15
Val	Arg	Ser	Val	Val	Pro	Asn	Lys	Ser	Asn	Asn	Glu	Ile	Val	Leu	Val	20	25	30	
Leu	Gln	Gln	Phe	Asp	Phe	Asn	Val	Asp	Lys	Ala	Val	Gln	Ala	Phe	Val	35	40	45	
Asp	Gly	Ser	Ala	Ile	Gln	Val	Leu	Lys	Glu	Trp	Asn	Met	Thr	Gly	Lys	50	55	60	
Lys	Lys	Asn	Asn	Lys	Arg	Lys	Arg	Ser	Lys	Ser	Lys	Gln	His	Gln	Gly	65	70	75	80
Asn	Lys	Asp	Ala	Lys	Asp	Lys	Val	Glu	Arg	Pro	Glu	Ala	Gly	Pro	Leu	85	90	95	
Gln	Pro	Gln	Pro	Pro	Gln	Ile	Gln	Asn	Gly	Pro	Met	Asn	Gly	Cys	Glu	100	105	110	
Lys	Asp	Ser	Ser	Ser	Thr	Asp	Ser	Ala	Asn	Glu	Lys	Pro	Ala	Leu	Ile	115	120	125	
Pro	Arg	Glu	Lys	Lys	Ile	Ser	Ile	Leu	Glu	Glu	Pro	Ser	Lys	Ala	Leu	130	135	140	
Arg	Gly	Val	Thr	Glu	Gly	Asn	Arg	Leu	Leu	Gln	Gln	Lys	Leu	Ser	Leu	145	150	155	160
Asp	Gly	Asn	Pro	Lys	Pro	Ile	His	Gly	Thr	Thr	Glu	Arg	Ser	Asp	Gly	165	170	175	
Leu	Gln	Trp	Ser	Ala	Glu	Gln	Pro	Cys	Asn	Pro	Ser	Lys	Pro	Lys	Ala	180	185	190	
Lys	Thr	Ser	Pro	Val	Lys	Ser	Asn	Thr	Pro	Ala	Ala	His	Leu	Glu	Ile	195	200	205	
Lys	Pro	Asp	Glu	Leu	Ala	Lys	Lys	Arg	Gly	Pro	Asn	Ile	Glu	Lys	Ser	210	215	220	
Val	Lys	Asp	Leu	Gln	Arg	Cys	Thr	Val	Ser	Leu	Thr	Arg	Tyr	Arg	Val	225	230	235	240
Met	Ile	Lys	Glu	Glu	Val	Asp	Ser	Ser	Val	Lys	Lys	Ile	Lys	Ala	Ala	245	250	255	
Phe	Ala	Glu	Leu	His	Asn	Cys	Ile	Ile	Asp	Lys	Glu	Val	Ser	Leu	Met				

agctgattat tagaattagt aaaaatgatt aagagaggat gacacaacca tacgggattt
420
gtatattctg attgacactc ttttggcagc gaattgggtc agcacctcgg gcagggaacc
480
aaaactgagt gaaaactgct ctttttcctc ctagctcagg ccaccaacgt cacagccggg
540
actgagagaa ctgctgcac cgtggaaact tctattctcg tggggcagag attgcactgt
600
gaaaccctac cgacactacc ccggaagggc ctggcctccg aggtgtctgc agcgtgctgc
660
cttcgccggg gcttttcaga atgggccggg gcctcggggg tcttcatccc caaggaagcc
720
tcttgatttt tggcaccgcc tttgtttttg ggccggaagc cgttgtgcgg ctgtcttctg
780
tgttcgtggc ggctgttgcc ctttcccagt ggctcggctt cattcccact gccctgcgac
840
ttggcaggcc catttagcct gttgttatga tactgtggat taaatctccg tctttgggta
900
gaagatccat tctgcttggt ggccggcatg gtctggtgag aggggtcggc ggtgctgggg
960
agactgctca ccattttggg gtttgccgct ttgccttcag agggcttatt gtgagtggat
1020
gattttcggg aaaagtact ctgtttccca gaggttgctg cgtgcgcatt cagcagaggc
1080
agcaggagc tgcaggaggt tcttgaggaa tagttgttct ttggatgtgt aatttctccg
1140
cagagcatga tttgggcctt cagctgttcg atgtcacagg aaaaccgggc agctttcccg
1200
agctcctcgt catatttacg ctgctgaca aagtgcctaa tttctgcctt gagttcggcc
1260
agctgcatct ctgccatctg actggcaagg tcagtgagtc tctttagttc ttctgcttcc
1320
ttctgacgag cagtcaggat ttccatggct tcttctttaa ctttatccat ttctgccatt
1380
aatgaaactt tttgtcaat gatgcagttg tgtaattcag caaaggcagc ttgatcttc
1440
ttcacggaac tatccacttc ttccttaatc atgacgcgat atctagttag agaaacgggtg
1500
cagcgttgca aatccttcac tgattttctca atatttgggc ctcttttctt tgccaactca
1560
tctggcttta tttcaagatg agctgcaggg gtattggact taacaggaga tgtttttgcc
1620
ttaggcttgc ttgggttaca aggtgctca gctgaccact gtaggccatc tgacctctct
1680
gttggtccat gtataggttt ggggttccca tctaaggata gtttctgttg cagtagtctg
1740
ttgccttctg tgacccacg aagtgccttt gaaggctcct caagtatcga gatcttttcc
1800
tcacgaggga taagggtcgt tttttcgta gcagaatctg tggacgagct gtccttctcg
1860
cagccattca tggggccgtt ttgaatctgt ggtggctgcg gctgcagggg ccctgcctca
1920
ggcctctcca ccttgtcttt agcatctttg ttgccttgat gctgcttga cttgcttctt
1980

tatggaagat ggactggaac aaggacccag ccagttaagg aggcttagaa tgctgggagc
60
ctgacctctg cctgtggtat cacctctgcc tgtgataaca gacaaaacca ggaagtgtat
120
ttactaaaaa gaataaacag tgctcgggtga atgggtgagag gaccagagag gaaatgggaa
180
taagtaatag gcatgtggcc agcagaaaaa ggagccaata tataagaaag caacaagtaa
240
actgctcccc tcgatggcag tgggaagcct gctgggatgg tgggggatca ggaaacttct
300
ctagccctgg aacactgaga gagacagaag tgatcactgc tgtgttgga ctggggaggg
360
gtggggacca agtgaccgca gatcagaagt cactgaatat caacgccatg gagagagagc
420
tggctctttc gttaagagtt gcct
444

<210> 5076

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5076

Met	Gly	Ile	Ser	Asn	Arg	His	Val	Ala	Ser	Arg	Lys	Arg	Ser	Gln	Tyr
1				5						10				15	
Ile	Arg	Lys	Gln	Gln	Val	Asn	Cys	Ser	Pro	Arg	Trp	Gln	Trp	Glu	Ala
			20					25					30		
Cys	Trp	Asp	Gly	Gly	Gly	Ser	Gly	Asn	Phe	Ser	Ser	Pro	Gly	Thr	Leu
		35					40					45			
Arg	Glu	Thr	Glu	Val	Ile	Thr	Ala	Val	Leu	Glu	Leu	Gly	Arg	Gly	Gly
	50					55					60				
Asp	Gln	Val	Thr	Ala	Asp	Gln	Lys	Ser	Leu	Asn	Ile	Asn	Ala	Met	Glu
65					70				75					80	
Arg	Glu	Leu	Ala	Leu	Ser	Leu	Arg	Val	Ala						
				85					90						

<210> 5077

<211> 2352

<212> DNA

<213> Homo sapiens

<400> 5077

tttttttttt tttttttcaa atgcagcata ttttaatttg tttcaaataa agcaatatat
60
gtatatatat tttttcagaa aaacaccaga tgttaaattc tacaaaagcg catgtgtcct
120
cagcagatca tgtttgtctg attattaaga attctttttt gtaacattaa ctctctaaag
180
acaatcaatg gactgacatc actgctacaa cacagggtgc taactgagcc tctgatcttc
240
agccacatct tgattttcct aataatgagt aaatactgcc tggctaaaat gctgcaaagt
300
cttgatgaga gaaagcatca acagatcaag caaagccatg aaaattatga agcaagctag
360

tgtctgcct ttcaccccca agattttgca caggttaagg ccagttatgg cctttttgaa
 1500
 atctgtaata gctccccttt ccccaactct aaagcctaga ccttaaactt gttcctagag
 1560
 ctatgcacac ccctgcccc gtttaccgtt cctccctcag ggcctccgtg acactccatg
 1620
 aaaagaagtt cttgcatacc ggaaagtga ataatggat gaattcaaaa aaaaaaaaaa
 1680
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 1712

<210> 5074
 <211> 240
 <212> PRT
 <213> Homo sapiens

<400> 5074
 Xaa Trp Lys Gln Leu Ser Gly Glu Gln Val Ser Trp Ser Lys Asp Phe
 1 5 10 15
 Pro Ala Val Asp Ser Val Leu Val Lys Leu Leu Glu Val Met Glu Gly
 20 25 30
 Met Asp Lys Glu Thr Phe Glu Phe Lys Phe Gly Lys Glu Leu Thr Phe
 35 40 45
 Thr Thr Val Leu Ser Asp Gln Gln Val Val Glu Leu Ile Pro Gly Gly
 50 55 60
 Ala Gly Ile Val Val Gly Tyr Gly Asp Arg Ser Arg Phe Ile Gln Leu
 65 70 75 80
 Val Gln Lys Ala Arg Leu Glu Glu Ser Lys Glu Gln Val Ala Ala Met
 85 90 95
 Gln Ala Gly Leu Leu Lys Val Val Pro Gln Ala Val Leu Asp Leu Leu
 100 105 110
 Thr Trp Gln Glu Leu Glu Lys Lys Val Cys Gly Asp Pro Glu Val Thr
 115 120 125
 Val Asp Ala Leu Arg Lys Leu Thr Arg Phe Glu Asp Phe Glu Pro Ser
 130 135 140
 Asp Ser Arg Val Gln Tyr Phe Trp Glu Ala Leu Asn Asn Phe Thr Asn
 145 150 155 160
 Glu Asp Arg Ser Arg Phe Leu Arg Phe Val Thr Gly Arg Ser Arg Leu
 165 170 175
 Pro Ala Arg Xaa Ser Thr Ser Thr Gln Thr Ser Trp Ala Thr Arg Pro
 180 185 190
 Xaa Asp Ala Leu Pro Glu Ser Ser Thr Cys Ser Ser Thr Leu Phe Leu
 195 200 205
 Pro His Tyr Ala Ser Ala Lys Val Cys Glu Glu Lys Leu Arg Tyr Ala
 210 215 220
 Ala Tyr Asn Cys Val Ala Ile Asp Thr Asp Met Ser Pro Trp Glu Glu
 225 230 235 240

<210> 5075
 <211> 444
 <212> DNA
 <213> Homo sapiens

<400> 5075

<210> 5073

<211> 1712

<212> DNA

<213> Homo sapiens

<400> 5073

ntgtggaagc agctttctgg tgagcagggtg agctggagca aggacttccc agctgtggac
60
tctgtgctgg tgaagctcct ggaagtgatg gaaggaatgg acaaggagac gtttgagttc
120
aagtttggga aggaactaac attcaccact gtactgagt accaacaggt ggtggagctg
180
atccctgggg gtgcaggcat cgctcgtggga tatggggacc gttctcgttt catccaactg
240
gtccagaagg cacggctaga ggagagcaag gagcagggtg cagctatgca ggcaggctctg
300
ctgaaggtgg taccacaggc tgtgctggac ttgctgacct ggcaagagtt ggagaagaaa
360
gtgtgtgggg atccagaggt cactgtggat gctctgcga agctcacccg gtttgaggac
420
ttcgagccat ctgactcgcg ggtgcagtat ttctgggagg cactgaacaa cttcaccaac
480
gaggaccgga gccgcttcct gcgctttgtc acggggccga gtcgcctgcc agcacggnha
540
tctacatcta cccagacaag ctgggctacg agaccancag acgcgctgcc cgagtcttcc
600
acttgctcca gcacctctt cctgccacac tatgccagt ccaagggtat cgaggagaag
660
ctccgctatg cggcctacaa ctgcgtggcc atcgacactg acatgagccc ttgggaggag
720
tgaggcgtgc cgccggctgt gggaccagca agactgcacg tgtccctctt ggccttgccc
780
agggcgaaga caccttcctt gccctggttt ggctgacgtg ctcagcaaaa ccccatgtgc
840
cctgtcctg tgtgcagttg gggtaggggc agctggcatg gtcaggtaac actagtggcc
900
cagccccgca gaccacaag ccctaccctg gctggggctt gcttcccgag gtatttcacc
960
tcttaagagg gaatcttcca caagcccagc acaagctgcc aggcctgagc tacttgaagg
1020
gggccatcta ggtecccaac ccatggactt tgccctcatt ttcagctccg ccttttttct
1080
cctattttct ctctggcttt cttcagccat gactcacaac taaaaacata aaacactgga
1140
ggttagtgga ggccccctcc caagcagga gacctggatg ggcagggagt gatagccaaa
1200
ctccttggtc acctgctcca agaaggaagc agtagctgag cacctgccct cacatactgc
1260
tcttttcccc tctccctcca caccagagat gtggtagct ctgttcttct accaaccag
1320
tctcaacaca caaagtgcc ccaacttccc tgactcagaa cccacatcca ctcaatgtga
1380
actctactac cagacctcc ccatattcct cacttctcca tcacctccag cctgactccc
1440

atagatttct catgcagcta gtgaggggac ttctctcttc acccatttcc accttctect
 1200
 attttcctt ttttctcttc tgttgagatg gagtctcact ctgtcaccca ggctggagtg
 1260
 cagtgtcgcg accttggtc actgcaacct ccacctccca gggtcaagca attctccac
 1320
 ctcagcctcc aaagtagctg ggattacagg catgcgcaac catgcccagc taatttttgt
 1380
 aatttttagta gagatgggtt ttcgcttagt agagatgggt gtttgccagg ctggtcccga
 1440
 actcctgacc tcaggtgatc cgcccacctc ggcctcccaa agtgcagggg ttacaggctt
 1500
 aagccaccaa gcccgccga ccttcttcta ttttccatt ctctttcca aagccatggc
 1560
 catgcgctcc tgtgtacagg tgcataaaca catcagtgtg ccatccctca catgcatgtc
 1620
 gttccccacc cctcttccc agggcttctc ttggctccag cgttctctg ggacctctg
 1680
 cagatacagc ctgtgctgga ccccagcca gggtagggc tcattctgct ctgtcttccc
 1740
 cactgcctca gtttcccca aaagctgctt tcacgtcctt ctagtgggg gcctcccatg
 1800
 ggggcaagga tccccttag gattcaatct ttctctttg ggcagtttt gctttgagtc
 1860
 cccagggat cagggtgaga atgaagaaga gctcagttag cggaatgaca gcagctgggt
 1920
 ggggtggtgtg gggagaggct gaggggaagg cagcccccc aggggggcct aaccgtggaa
 1980
 tcaactgcaat ttctctgag atcccgactt ggacaaccag gacagggatt gaccattccc
 2040
 ttccattcc actcggactg tgtccaagcg ggggctgtcc actgcggggg ctgctcccc
 2100
 atcgggtcct aacagctcta agactgggag tggagttcct ggaggtgtgg ggagggggg
 2160
 gtgttttcaa tttagaaaaa tctcagccag ctcgag
 2196

<210> 5072

<211> 76

<212> PRT

<213> Homo sapiens

<400> 5072

Met	Glu	Ser	His	Ser	Val	Thr	Gln	Ala	Gly	Val	Gln	Cys	Arg	Asp	Leu
1				5					10					15	
Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Arg	Phe	Lys	Gln	Phe	Ser	His	Leu
			20					25				30			
Ser	Leu	Gln	Ser	Ser	Trp	Asp	Tyr	Arg	His	Ala	Gln	Pro	Cys	Pro	Ala
		35				40					45				
Asn	Phe	Cys	Asn	Phe	Ser	Arg	Asp	Gly	Phe	Ser	Leu	Ser	Arg	Asp	Gly
	50				55					60					
Cys	Leu	Pro	Gly	Trp	Ser	Arg	Thr	Pro	Asp	Leu	Arg				
65					70					75					


```

<400> 5071
ntttttttttt tttttttttt tttttttttt ttttttagaaa agcagggttta ttggtcggggc
60
tgctcaccag gacacagcaa cgtgagaggt tccccaagcc cacagaaaac tgcatctgcc
120
cacagctcag gccccttcag gccatcagca ccaagggacc ttgtcccaca atcccccaacc
180
tccctcggca gaggggtctt cagccattca gaggagagaa gagaaccgag aaagggaaaa
240
ggaagaaaaa aaaaaaaaaa gcaaagcttt gtattgtata aaagggtttgt gtccccaggc
300
tccctcccc aatcccttaa aacaatgaac tgcagttcta aaaagcaggg cagagaaggt
360
aaggagcagg tggggggaag gaggaagctc tcggggcctc ccttcaggct gtgactgggg
420
agaggggctg ttcttgcttc tgacaaacct cctttaatgg ggaggaacaa ggggactcgt
480
gtcttgagaa cctggctcgtg tcttgagaac ccagtcgaa cagaatcagg cctctggact
540
gggagcaaca ctcccttcac ccccaaagat tcaggaaaag caccccaagg acaaggaaa
600
caatgaggtc tgggctagct ctgcagcttt aggatactag ctctagggaa ggattttttc
660
ctttttaaac agcgtctcac tctgttgctt aggatggagc acagaggcac cctcatagct
720
cactgcagcc tcaaactcct gggctctggc gatcctcccg cctcagcctc ccaagtagct
780
gagaccacag gcacgtgcc aatgctcct aggggaaggag cttgagaaga aactgccagg
840
agtgaaccag ggctggctgc tctgtgatgt tctctcccca cctcccctcc agctctcaac
900
ttggtggcag ggccggcacc ctgctctccc tcctaactcc cagcctgctg ctgccccctt
960
ctgggaccct aattttctgg actttgagaa atgggctgcc cctgggggtg cctccaagag
1020
cccatttgag ggatcgggtg gggctgacct ctctgtcttc tttggatcat cgcttctca
1080
cactgtctc cctcttgatt ctgaaaaatg gtctgctgc ccatggagaa ccacagtaag
1140

```

tccagcctgg gtgacagagc aagactcccg tctcgggggc ttaaaaaaaa aaaaatgctg
 3000
 tatctaaatg aatctgtgta attgggcccc gatgtgggtt tgctcagtat tagtagacaa
 3060
 ggtctttggt cagacgatta ggtgcctaac tggcaaattgc cttagtttct taaaacgtat
 3120
 tttctgatgt ggctttacat ttcaaaagtg aacttgattc aacctgagaa aactgattaa
 3180
 aaaattagtt taaatttgcc agcagggaag taaaataatt atgggaagag tgtcttaagc
 3240
 ctaatattaa atcagttttg ttaaggggaa aactcaatag ttctgttact taggctgtta
 3300
 gatccaagtt gatttttgtg tctacagcta aattttgttt acaattaggc tattttttaa
 3360
 tataggattt agaaaccaag ggtatgtggt ttaaaattac actttttctt aacctgtcta
 3420
 gctgtcggaa aaggtaacag aagatggaac tcgaaatccc aatggaaaac ctacccagca
 3480
 aagaagcata gcttttagct ctaataattc tgtagcaaag ccaatacaaa aatcagctaa
 3540
 agctgccaca gaagaggcat cttcaagatc accaaaaata gatcagaaaa aaagtccata
 3600
 tggactgtgg atacctatct aaaagaagaa aactgatggc taagtttgca tgaaa
 3655

<210> 5070

<211> 255

<212> PRT

<213> Homo sapiens

<400> 5070

Met	Ser	Asn	Tyr	Ala	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
			20					25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
			35					40					45		
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
			50				55					60			
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
65					70					75					80
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
			85						90					95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
			100					105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
			115				120					125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
			130				135					140			
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
145					150					155					160
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Gly	Gly	Trp
			165						170					175	
Val	Ile	Tyr	Leu	Ser	Ile	Cys	Gly	Asn	Val	Trp	Trp	Gln	Tyr	Met	Ser

taggacgctc aggccttttag tcaagaaaac aaaactaatt gttgagataa tttagaatt
1380
ttattctttt cagcaagaaa tgagctggag aatagaattt tcagtgaata aagttacaca
1440
gttgccccctc tgttccactcg ggggtttggt gccaggatgc atatggaacc ctgcgcgaca
1500
cttgggggtt acagtctctc aaacactgtg gtactttcta tctgcattta gtaaggggga
1560
gaaaaaaca gtataaagtg gaccagcgca gctactagtg ttcaaggga accttagttt
1620
acctattata aaacaagtga cttaatatat ttaataccac aaaataacat atttattgtg
1680
taattctgag ttctcttggg aaataactac cagattaatg agtatttta aatctctctc
1740
ttttttttt agatcgaatg gagctgtag aaatagcaaa aaccaatgca gcgaaagctc
1800
taggaacaac caacattgac ttgccagcta gtctcagaac tgttccttca gccaaagaaa
1860
caagccgtgg aataggtgta tcaagtaatg gtgcaaagcc tgaagtaagt attctaggtt
1920
tgtcggaaca aaactttcag aaagccaact gtcaaatctg attagccact tatatcttag
1980
actatacttt ttgggaagtc tagagatgta tataatgtgc taaattcaaa gtagcaaatc
2040
tgaagatagg caatgtcaaa cccatgaaaa tgggagatta atgagcttta tttggccgtg
2100
catggtgcct catgcctgta atgaggcaga tggcttgagt ccaggagttc aagactagcc
2160
tgggcaatgt ggcaaaaccg cgtgtttaca aaaaatacaa aaattagcca ggcattggtg
2220
tgcattgcctg tagtcccagc tgtttgggag gctgaggcag gaggatcttt gaggcttaga
2280
tgctaagggt gcagtgcgac aagatggcac cattgcactc tagcctgggc agcagagcga
2340
gaccctgtct caaaaaatac atttattttt ttcattttca gttaacagtg tactcttata
2400
acaccgttat tagctggtac tttggtgatt tctattacta gtttttctaa gctatttaca
2460
gagtgtttgt agctttcatt tgcagcatta tgttcccaca aattctgtac tcagcatata
2520
cagtatagtt tatctgtctc atttctgtct tatagaaatc atgaatgtgg tctccagaca
2580
gtgatgaaga aaatctgttg gtaattgata catgggttca agtgtcagag gtttaatttg
2640
aagtttatgt tcacacactg aaaacttagt ttttttgttg gtagatccat gtgcattgta
2700
gaatttggga caggcactat ttgcataaag tattaagtc aatttttaaa ctaagcaag
2760
gtacacgttg taacggtggg gcatctgtga aaaagatgtc cttttcataa tatatgcaat
2820
atattccaga tgttttgaga gattacagaa gaggaggcct gcttcacttg cagataagtt
2880
tattataatt ctccagaaat gtgcaggatg tgcattagca aattgcactg tacttttcac
2940

Ser Tyr Thr 165 170 175

 <210> 5069
 <211> 3655
 <212> DNA
 <213> Homo sapiens

 <400> 5069
 ntntntntntt tntntntntt tttggaagtc ctgagttgag gcttgcgagg, tcctttccgg
 60
 agaaaagcgca ggctaaagcc gcaggtgaag atgtccaact acgcgaacga catgtggccc
 120
 ggctcgccgc aggagaagga ttcgccctcg acctcgcggt cgggcggggtc cagccggctg
 180
 tcgtcgcggt ctaggagccg ctctttttcc agaagctctc ggtcccatc ccgcgtctcg
 240
 agccgggtttt cgtccaggag tcggaggagc aagtccagggt cccgttcccg aaggcgccac
 300
 cagcgggaagt acaggcgcta ctgcgggtca tactcgcgga gccggtcgcg atcccgcagc
 360
 cgccgttacc gagagaggcg ctacgggttc accaggagat actaccggtc tccttcgchg
 420
 taccggttccc ggtcccgtag caggtcgcgc tctcggggaa ggtcgtactg cggaagggcg
 480
 tacgcgatcg cgcggggaca gcgtactac ggctttggtc gcacagtgtc cccggaggag
 540
 cacagcagat ggagggacag atccaggagc aggtcgcgga gcagaacccc ctttcgctta
 600
 agtgaaaaag gtgggtgggt catttacctt tccatttgtg gtaatgtatg gtggcagtat
 660
 atgagtaggc tagggaacca acgttgctgt gtagtttcaa tattagtacc tttagtccc
 720
 gaaatctttt tggaggaaag agggaggaca ttacctgtat ttaagtggac agcattctct
 780
 ttagggttaa aggtcaactg gaagttaa at ggctcaggat gtagggaact ttttttccta
 840
 ttggctgact gttcttagtg ggtggagcct tttaaatgtt atgattaagt taaaggttct
 900
 aagttaacgt gattgggaag aacaatatca aaacacgcct tcttttagtt gacattatta
 960
 ctgaataaaa ttggattgtc gagtatccta agtgacctag gaggccgggc gcggcggtc
 1020
 acctctgtaa tcccagcact tggggaggcg gaggcgagg cggtgggtc acttgaggcc
 1080
 aggcgttcca caccagccag gccaacatag ctactatct agtaaaagta caaaaattag
 1140
 ccgggggtgg cggtagaaat acactttagt agtgatcag tattggttca gtggttgtga
 1200
 taattatata aagaatctac agcagaaaaa cctgggtttc agaaatacat ctttgaagag
 1260
 aaagcaaaat aatatcacta ttagctagag aaaattaagt acaacaaaaa gacaaaataa
 1320

gcttgtgagt gatttttgtc cattcaattg tgccttcttt gtattatgat aagatggggg
 1320
 tacttaagga gatcacaagt tgtgtgagga ttgcattaac aaacctatga gccttcaatg
 1380
 gggaagacca gaagggtgag agggggccctg aaagttcata tgggtgggtat gtcccgagc
 1440
 agagtgagga gatgaagctt acgtgtcctg acgttttgtt gcttatactg tgatatctca
 1500
 tcctagctaa gctctataat gcccaagacc ccaaacagta cttttacttt gtttgtacaa
 1560
 aaacaaagac atatagccaa tacaaatcaa atgccggagg tgtttgatgc catatttgca
 1620
 aattgccatc tattgaaatt ctgcgcacac tacatagaca taattgttat ctcttttggg
 1680
 cttatgtgat tttctgttta caagtagaat agccaattat ttaaattgtt agttgccaca
 1740
 gtgaaccagg agtcaactgag ccaatgactt taccagctgc tgactaatct tcataccac
 1800
 tgtagatttt gctgcatgtg caggtcctct atttttaatt gctgttttcg ttgctgcagt
 1860
 actttacaaa cttctagttc gttgagactt agtgaccatt tggcatcaag ttaacatcac
 1920
 acaataggaa acaccacttc cacaagtctc aagcctcagt gctaaagtac tactgaaaag
 1980
 gaactaggaa gtttggccaa ttaaaaaaaaa aaaaaagtcg acc
 2023

<210> 5068

<211> 179

<212> PRT

<213> Homo sapiens

<400> 5068

Ala	Glu	Ala	Gln	His	Asp	Arg	Glu	Leu	Arg	Xaa	Leu	Glu	Gln	Arg	Val
1			5						10					15	
Ser	Leu	Arg	Arg	Ala	Leu	Leu	Glu	Gln	Lys	Ile	Glu	Glu	Glu	Met	Leu
			20					25					30		
Ala	Leu	Gln	Asn	Glu	Arg	Thr	Glu	Arg	Ile	Arg	Ser	Leu	Leu	Glu	Arg
			35				40					45			
Gln	Ala	Arg	Glu	Ile	Glu	Ala	Phe	Asp	Ser	Glu	Ser	Met	Arg	Leu	Gly
	50				55					60					
Phe	Ser	Asn	Met	Val	Leu	Ser	Asn	Leu	Ser	Pro	Glu	Ala	Phe	Ser	His
65				70					75					80	
Ser	Tyr	Pro	Gly	Ala	Ser	Gly	Trp	Ser	His	Asn	Pro	Thr	Gly	Gly	Pro
			85				90						95		
Gly	Pro	His	Trp	Gly	His	Pro	Met	Gly	Gly	Pro	Pro	Gln	Ala	Trp	Gly
			100				105					110			
His	Pro	Met	Gln	Gly	Gly	Pro	Gln	Pro	Trp	Gly	His	Pro	Ser	Gly	Pro
		115				120					125				
Met	Gln	Gly	Val	Pro	Arg	Gly	Ser	Ser	Met	Gly	Val	Arg	Asn	Ser	Pro
	130				135					140					
Gln	Ala	Leu	Arg	Arg	Thr	Ala	Ser	Gly	Gly	Arg	Thr	Glu	Gln	Gly	Met
145				150					155					160	
Ser	Arg	Ser	Thr	Ser	Val	Thr	Ser	Gln	Ile	Ser	Asn	Gly	Ser	His	Met

85 90 95
 Lys Gly Glu Arg Ile Leu Pro Pro Val Val Gln Ser Ser Pro Arg Val
 100 105 110
 Arg Gly Pro Pro Arg Arg Ser Arg Thr Pro Gly
 115 120

<210> 5067
 <211> 2023
 <212> DNA
 <213> Homo sapiens

<400> 5067
 gctgaggcac aacatgatcg agagcttcgg nagcttgaac agaggggtctc cctccggagg
 60
 gcactcttag aacaaaagat tgaagaagag atgttggctt tgcagaatga gcgcacagaa
 120
 cgaatacgaa gcctgttgga acgtcaagcc agagagattg aagcttttga ctctgaaagc
 180
 atgagactag gttttagtaa tatggctcct tctaactctt cccctgaggc attcagccac
 240
 agctacccgg gagcttctgg ttggtcacac aacctactg ggggtccagg acctcactgg
 300
 ggtcatccca tgggtggccc accacaagct tggggccatc caatgcaagg tggaccccag
 360
 ccatggggtc acccttcagg gccaatgcaa ggggtacctc gaggtagcag tatgggagtc
 420
 cgcaatagcc cccaggctct gagggcgaca gcttctgggg gacggacaga gcagggcatg
 480
 agcagaagca cgagtgtcac ttcacaaata tccaatgggt cacacatgtc ttatacataa
 540
 ctttaataatt gagagtggca attccgctgg agctgtctgc caaaagaaac tgcttacaga
 600
 catcatcaca gcagcctcct cacttgggta ctacagtgtg gaagctgagt gcatatggta
 660
 tatttttattc atttttgtaa agcgttctgt tttgggttta ctaattggga tgtcatagta
 720
 cttggctgcc gggtttggtt gtttttgggg aaattttgaa aagtggagtt gatattaaaa
 780
 ataaatgtgt atgtgtgtac atatataac acacacatac acatatatta tgcattgtgt
 840
 gaaaagaatt ggctagatag gggatttttc tgaacactgc aaaaatagaa cgtagcaaaa
 900
 tggcttcagt tatcactttt ggggtgtctgt atcctaagaa gtttctgaaa agatctaaag
 960
 cctttttatc ccatatccca aattcttatg agccactcac agcaggcagc atatgttgaa
 1020
 ataagttatt actggtacac acctgcattg cctcaccagt gtatttattt gttattaaat
 1080
 tgatctgact tctcagcctc atttggacta aaaaaagaaa gcagaaatcc atgaacacat
 1140
 tgcttctcgg ccttttggct aagatcaagt gtagaaatcc atgaacacta aaggacttca
 1200
 ttgatttttt cagagagtag aaaacaactt agtttttctt ttttcctgaa tgcgtcatag
 1260

<400> 5064

```

Met Asp Arg Leu Glu Arg Pro Leu Val Asp Leu Pro Leu Leu Leu Asp
 1          5          10          15
Pro Pro Ser Tyr Val Pro Asp Thr Val Asp Leu Thr Asp Asp Ala Leu
      20          25          30
Ala Arg Lys Tyr Trp Leu Thr Cys Phe Glu Glu Ala Leu Asp Gly Val
      35          40          45
Val Lys Arg Ala Val Ala Ser Gln Pro Asp Ser Val Asp Ala Ala Glu
      50          55          60
Arg Ala Glu Lys Phe Arg Gln Lys Tyr Trp Asn Lys Leu Gln Thr Leu
65          70          75          80
Arg Gln Gln Pro Phe Ala Tyr Gly Thr Leu Thr Val Arg Ser Leu Leu
      85          90          95
Asp Thr Arg Glu His Cys Leu Asn Glu Phe Asn Phe Pro Asp
      100          105          110

```

<210> 5065

<211> 370

<212> DNA

<213> Homo sapiens

<400> 5065

```

attgaggacg cgcgggagcg aatgaggacg ctgcggaagc tgatccggga tctcccagga
60
cactactatg aaacgctcaa attccttggtg ggccatctca agaccatcgc tgaccactct
120
gagaaaaaca agatggaacc ccggaacctg gccctgggtct ttgggcccgc actggtgagg
180
acgtctgagg acaacatgac agacatggtg acccacatgc ctgaccgcta caagatcgtg
240
gagacactga tccagcactc agactgggtc ttcatgtgacg aagaggacaa gggagagaga
300
attctaccac ctgtagttca gtcaagtcca aggttctgtg ggcccccaag aaggagccgt
360
acgcccgggc
370

```

<210> 5066

<211> 123

<212> PRT

<213> Homo sapiens

<400> 5066

```

Ile Glu Asp Ala Arg Glu Arg Met Arg Thr Leu Arg Lys Leu Ile Arg
 1          5          10          15
Asp Leu Pro Gly His Tyr Tyr Glu Thr Leu Lys Phe Leu Val Gly His
      20          25          30
Leu Lys Thr Ile Ala Asp His Ser Glu Lys Asn Lys Met Glu Pro Arg
      35          40          45
Asn Leu Ala Leu Val Phe Gly Pro Thr Leu Val Arg Thr Ser Glu Asp
      50          55          60
Asn Met Thr Asp Met Val Thr His Met Pro Asp Arg Tyr Lys Ile Val
65          70          75          80
Glu Thr Leu Ile Gln His Ser Asp Trp Phe Phe Ser Asp Glu Glu Asp

```

<213> Homo sapiens

<400> 5062

```

Met Ala Gly Trp Gly Leu Val Asp Val Ser Gly Ala Pro Glu Pro Trp
 1           5           10           15
Arg Ile Pro His Gly Ile Pro Leu Pro Ala Leu Ser Gly Leu Cys Gly
          20           25           30
Val Arg Arg Ser Pro Ser Ser Arg Phe Ser Phe Phe Pro Gln Gln
          35           40           45
Arg Asn Trp Arg Lys Asp Ile Lys Leu Ser Ala Val Asp Leu Ser Ala
          50           55           60
Glu Ile Phe Pro Glu Ser Met Val Val Leu Asn Tyr Leu His Val Ser
65           70           75           80
Ser Ile Phe Asn Ser Gly Val Gly Leu Phe Leu Ile Ser Ser Gln Lys
          85           90           95
Cys Ser Ala Leu Gly Glu Gly Thr Ser Pro Leu Ala Cys His Phe Pro
          100          105          110
Gly Val Leu Tyr His Phe Asp Gly Thr Leu Trp Ser Ala Glu Asn Ala
          115          120          125
Leu Ser Trp His Ala Ser Arg Leu
          130          135

```

<210> 5063

<211> 561

<212> DNA

<213> Homo sapiens

<400> 5063

```

gacgcaaccc cagtgtcaaa ccagggggta agtcaaggta tccggccagg cgccggcagc
60
tgagggggcc cagtggggtc tcgtctgtgg cccagagacg tggcggaaga aggcagtaca
120
tctcccttct tagagagaga gtggaagctt ctgagtgtgg cttgggtcgt tctgaacctat
180
ggtgacgttt ccacctgcc actgcctgtc ttccagtttg acttgctgga aatggaccgg
240
ctggagaggg cactggttga cctgccgtc ctctgggacc cgccctccta cgtgcccgac
300
acggtggacc tcaccgatga cgctctggcc cgaaaatact ggctcacctg ctttgaggag
360
gccctggacg gggtagtgaa gcgcgcagtg gcgagccagc cagactctgt ggatgcagcc
420
gagagggcgg agaagtccg gcagaagtac tggaacaagc ttcagaccct gaggcagcag
480
cccttcgcct atgggaccct gaccgtgcgc agcctgctgg acaccagga gactgtctg
540
aacgagttca acttcccga t
561

```

<210> 5064

<211> 110

<212> PRT

<213> Homo sapiens

ggctttggat tggacagtca aaggggaagtg ggcaaaacca gctgagaacc cgggagctgg
1080
atgcatatat tctggaatca gggcctgcaa actcaaagat tggtttgtgg ctggtgactt
1140
ctctctgcta agtaaataca tgaccattca ttgagaactg atggggaccc agcgtgtggc
1200
ccaatgagtg gcagtttttt cctagccagc ttctgtggcc aaatttggag gattttccaa
1260
cctgctatgg ctggaccctt ggggtgttaa tcaactaaatt ccctttctac ctgctctctt
1320
cttctgaaa cactcagagc tgacttcttc cttctttcta atcaacaaag acaaaactcc
1380
aagccctttt tcagccttca cacaattttt ctttctagaa gacatccgct tctggaagcc
1440
tccttcctta atgaaggagc agtagggccc agctaccca aacatgcaca tgctcttctc
1500
accaacgtgc ctctcacttg cctctaactg gctcgagcca tccttttgtt ctaaataatt
1560
cttctcect ccctccctt tttctcttc acctcttgag gcgcagccta ttggccagga
1620
tggaactggg agcaaggcgg ggacctcag tgcaggggac ccattctct aaggccactg
1680
agttctagga ctggagtagg agaggggtgct gttgtcaagg ttaagtcaa acttgagatt
1740
ttaaaaagac aggattgggg aagggggatt gcatgcta atcccaacctta taggcaggct
1800
gggatcaaga ccttgaagg tagggctctc caccagctc gtaagcacca gtgtgccac
1860
cttatggcct ggggacccag gtttgcagga ggaagttaa cagtggggct gtttttcccc
1920
aaagctgtgg gtcactgatc ctgtcttctc actggctctg atcatgcagc ttgggaacca
1980
cagagacatg agactgcacc aaacagggt gatgatttag ccagaaactc aggaaggctc
2040
agcacagccc tccacacact tcccaggaag tgtttggctt ggccctgcag ttgggactaa
2100
acttatatgc acctgcaggt cttgttgggt gcacogtgag caagttctca cccaaccac
2160
ctgacccacc ctctgaaaca aggacgaaag ggctggcagc tttcattata aggggttct
2220
catacccatg gcatggctga ggggtgggag tcagcctgct cgatgacagc tctgcagggg
2280
atgacctaac tgaaccaact cagtgtttct attcccagtg gcatctctt tgcacatctt
2340
cattttggag cctgggatga ctgcctagga cacttatgct agacctgtta atgccagtg
2400
gaaatttcca actaaatact taataaaata attacaaaaa gaaaaaaaaa tgacacattg
2460
ca
2462

<210> 5062

<211> 136

<212> PRT

```

<400> 5061
gcgggccgcca attttttttt tttttttttt ttttttttaa aaaggcccaa aactttattt
60
agtttttcagg gaaatataag atgcatgtaa acataaaata caaaacaaaa ccaaatactt
120
acagtctaga agcatgccaa gacagagcat tttctgcaga ccaaagagtc ccgtcaaagt
180
gataaaggac acctggaaag tggcaggcca aggggctggt cccttcccca agggcactgc
240
atttttgtga tgagattaaa aacaaaccaa ctccactatt aaaaatgcta gaaacatgga
300
gatagtttag caccaccatt gattctggaa atatttcagc actcaaatcg actgcactga
360
gtttaatgtc ctttctccag tttctctgct gaggaggaaa gaaggaaaac ctggaggaag
420
ggctcctcct gaccccacag agcccactaa gagctgggag gggaattcca tgaggaattc
480
tccaagggtt tggagctcca gagacatcca ccagtcccca ccagccatg cagtccacat
540
gctcacgctt cagggattac tgaagtctgc cttgcccggg agtcacttcc tgcagacctc
600
tgagtacctg gtggggaaac ccatttccca tcctgtgtct tggatttaaa gaaaacctgt
660
tggagataat gagttgtaaa ttcaaggagg gtggctgttt tgctgttctt tctctgcagt
720
aaactcttat ggggagtgtg ccttggttat aaggcaacgc aaaatggtag ggtatatcca
780
tggatgaatg ttcatcacac ccaatcta atcataccagg tggcaggctc agcaaactga
840
accaccacag gtgtcagaga tacttgagaa tgactggtac caacaagacg acaaaggagg
900
ttgccttctt cccagatgtg cccaatggag tctgaaactc gggttctaatt tgtggagggtg
960
ggctccctact gtatgacca ttgtgggtcac tgctctttga gccatacaac ttgagagact
1020

```

<211> 122

<212> PRT

<213> Homo sapiens

<400> 5058

```

Met Val Ser Ile Pro Glu Tyr Tyr Glu Gly Lys Asn Val Leu Leu Thr
 1           5           10           15
Gly Ala Thr Gly Phe Leu Gly Lys Val Leu Leu Glu Lys Leu Leu Arg
          20           25           30
Ser Cys Pro Lys Val Asn Ser Val Tyr Val Leu Val Arg Gln Lys Ala
          35           40           45
Gly Gln Thr Pro Gln Glu Arg Val Glu Glu Val Leu Ser Gly Lys Leu
          50           55           60
Phe Asp Arg Leu Arg Asp Glu Asn Pro Asp Phe Arg Glu Lys Ile Ile
65           70           75           80
Ala Ile Asn Ser Glu Leu Thr Gln Pro Lys Leu Ala Leu Ser Glu Glu
          85           90           95
Asp Lys Glu Val Ile Ile Asp Ser Thr Asn Ile Ile Phe His Cys Ala
          100          105          110
Ala Thr Val Arg Phe Asn Glu Asn Leu Arg
          115          120

```

<210> 5059

<211> 480

<212> DNA

<213> Homo sapiens

<400> 5059

```

ctcgagaact gaaagacact ctctatgggt taagccaccc agtgcattgt atcttggtat
60
aactgcccga gctgactgag acggacgttc aggacagaga gcgtgaatgc atagtgcac
120
cagctgtgag tctttctcca gggacagtcg gcagccggcc ctaggtgcag agccgatgac
180
aaggaccag gctctcagca ggtcttccaa gcagtgtggt agaaaggcag gcaggggtgtg
240
gggaagtga gccaggccac cagtcattgat gtcaagactg agccaggaag caaaggcag
300
cagagagatg gggaggagag ggagcaggag gggactggcc atctctgaga cagaagcgtg
360
agtagtgggt ggacttgagg gcaggagagg actgaaaggg cagaggcctg ggcgatgcag
420
ccagagaggg agatgctggt gtggggaggt ctgggcaggg atgttttagg tgatggcaga
480

```

<210> 5060

<211> 114

<212> PRT

<213> Homo sapiens

<400> 5060

```

Met Ala Ser Pro Leu Leu Leu Pro Leu Leu Pro Ile Ser Leu Pro Ala
 1           5           10           15
Phe Ala Ser Trp Leu Ser Leu Asp Ile Met Thr Gly Gly Leu Ala Pro

```

	500		505		510										
Phe	Asn	Ile	His	Ser	Trp	Glu	Lys	Lys	Tyr	Pro	Cys	Arg	Tyr	Cys	Glu
	515						520					525			
Lys	Val	Phe	Pro	Leu	Ala	Glu	Tyr	Arg	Thr	Lys	His	Glu	Ile	His	His
	530						535					540			
Thr	Gly	Glu	Arg	Arg	Tyr	Gln	Cys	Leu	Ala	Cys	Gly	Lys	Ser	Phe	Ile
545					550					555					560
Asn	Tyr	Gln	Phe	Met	Ser	Ser	His	Ile	Lys	Ser	Val	His	Ser	Gln	Asp
				565						570				575	
Pro	Ser	Gly	Asp	Ser	Lys	Leu	Tyr	Arg	Leu	His	Pro	Cys	Arg	Ser	Leu
			580					585					590		
Gln	Ile	Arg	Gln	Tyr	Ala	Tyr	His	Ser	Asp	Arg	Ser	Ser	Thr	Ile	Pro
	595						600					605			
Ala	Met	Lys	Asp	Asp	Gly	Ile	Gly	Tyr	Lys	Val	Asp	Thr	Gly	Lys	Glu
	610						615					620			
Pro	Pro	Val	Gly	Thr	Thr	Thr	Ser	Thr	Gln	Asn	Lys	Pro	Met	Thr	Trp
625					630					635					640
Glu	Asp	Ile	Phe	Ile	Gln	Gln	Glu	Asn	Asp	Ser	Ile	Phe	Lys	Gln	Asn
				645					650					655	
Val	Thr	Asp	Gly	Ser	Thr	Glu	Phe	Glu	Phe	Ile	Ile	Pro	Glu	Ser	Tyr
			660					665					670		

<210> 5057

<211> 673

<212> DNA

<213> Homo sapiens

<400> 5057

```

nnggcggcgc agctattgct ggacggccag tgggagagcg aggcctgagc ctctgcgtct
60
aggatcaaaa tggtttcaat cccagaatac tatgaaggca agaacgtcct cctcacagga
120
gctaccgggt ttctagggaa ggtgcttctg gaaaagttgc tgaggtcttg tcctaagggtg
180
aattcagtat atgttttggt gaggcagaaa gctggacaga caccacaaga gcgagtggaa
240
gaagtcctta gtggcaagct ttttgacaga ttgagagatg aaaatccaga ttttagagag
300
aaaattatag caatcaacag cgaactcacc caacctaacc tggctctcag tgaagaagat
360
aaagagggtg tcatagattc taccaatatt atattccact gtgcagctac agtaaggttt
420
aatgaaaatt taaggtaagt acaagtaatt atataatatt tgaacttcag tatagttatt
480
aaaaaatctc attttaattc tacttttttag tcaatttggt ttgaatgtga tttgatacta
540
tttgccatag ttaactgtgg ctttcagtgt cctacagagt gttaaaagaa ttctcttctt
600
cttctcagtt taaaaatctt ggataactaa tacatgttta ttggaagaag ttgccatgaa
660
tttaaacatg cat
673

```

<210> 5058

4242

ataattacta gaaatactaa tgatccaggc gtaggatcaa aacatctaata ggaggggtcag
 1440
 aagatcatta ctttagatac agctactgaa attgaagggt tategactgg ttgcaagggt
 1500
 tatgcaaata tcgggtgaaga tacttatgat atagtgatcc ctgtcaaaga tgaccctgat
 1560
 gaaggggagg ccagacttga gaatgaaata ccaaaaacgt ctggcagcga gatggcaaac
 1620
 aaacgtatga aagtaaaaca tgatgatcac tatgagttaa tagtagatgg aagggtctat
 1680
 tatatctgta ttgtatgcaa aaggatcatat gtctgtctga caagcttgcg gagacatttt
 1740
 aacattcatt cttgggagaa gaagtatccg tgccgttact gtgagaagggt atttcctctt
 1800
 gcagaatatc gcacaaagca tgaaattcat cacacagggg agcgaaggta tcagtgtttg
 1860
 gcctgtggca aatctttcat caactatcag tttatgtctt cacatataaa gtcagttcat
 1920
 agtcaagatc cttctgggga ctcaaagctt tatcgtttac atccatgcag gtctttacaa
 1980
 atcagacaat atgcatatca ttccgataga tcaagcacta ttcttgcaat gaaggatgat
 2040
 ggtattgggt ataagggtga cactggaaaa gaacctccag tagggaccac tacatctact
 2100
 cagaacaagc caatgacctg ggaagatatt tttattcagc aggaaaatga ttcaattttt
 2160
 aaacaaaatg taacagatgg cagtactgag tttgaattta taataccaga gtcttactaa
 2220
 actcctttga aatactagaa agttttgttt tggatgatgg ggcaggggtt tcagaagatc
 2280
 tgtaaaacaa attaagggtgc gaacaagtta atttgatctg ccacattatc tgaaggaagt
 2340
 gtatggggat tttgtttgat aatttttaga agcaaatatt cctgaaagtt ttgagtagag
 2400
 gtgagacccc ctccccaagt atctgtttat atagttagtt ttcagctcat ttaaaagagg
 2460
 caaaaattaa aagcttggag agatagtttc ctgaatagaa tttgaagcag tctgaatgtt
 2520

<210> 5056

<211> 672

<212> PRT

<213> Homo sapiens

<400> 5056

Met	Glu	Ser	Arg	Lys	Leu	Ile	Ser	Ala	Thr	Asp	Ile	Gln	Tyr	Ser	Gly
1				5					10					15	
Ser	Leu	Leu	Asn	Ser	Leu	Asn	Glu	Gln	Arg	Gly	His	Gly	Leu	Phe	Cys
			20					25					30		
Asp	Val	Thr	Val	Ile	Val	Glu	Asp	Arg	Lys	Phe	Arg	Ala	His	Lys	Asn
		35					40					45			
Ile	Leu	Ser	Ala	Ser	Ser	Thr	Tyr	Phe	His	Gln	Leu	Phe	Ser	Val	Ala
		50				55				60					
Gly	Gln	Val	Val	Glu	Leu	Ser	Phe	Ile	Arg	Ala	Glu	Ile	Phe	Ala	Glu

145

150

155

<210> 5055

<211> 2520

<212> DNA

<213> Homo sapiens

<400> 5055

naggagcaag ccatgaaatt ggacacttgt tccaaaagcc aacctgtatg aacaatttct
60
gtaaaagcca aaaaattatg ctgaactttg gttaaaactt gaataaacta tttaatgatg
120
ctactgctta aattctaaat aagtactttt gttttttctc tctaactctc tcccatcccc
180
tcctctcttt ctcttaaagg catggagagt agaaaactga tttctgctac agacattcag
240
tactctggca gtctgctgaa ctcttgaat gagcaacgtg gccatggact cttctgtgat
300
gttaccgtta ttgtggaaga ccgaaaattc cgggctcaca agaattttct ttcagcttct
360
agtacctact tccatcagct cttctctggt gctgggcaag ttgttgaact gagctttata
420
agagcagaga tctttgcaga aattctcaat tatatctata gttctaaaat tgttcgtggt
480
agatcagatt tgcttgatga gttaattaaa tcagggcagt tattaggagt gaaatttata
540
gcagagcttg gtgtccatt gtcacagggt aaaagcatct caggtaacagc gcaggatggt
600
aatactgagc ctttacctcc tgattctggt gacaagaacc ttgtaatata gaaatcaaaa
660
gatgaagccc aagataatgg ggctactata atgcctatta taacagagtc tttttcatta
720
tctgccgaag attatgaaat gaaaaagatc attgttaccg attctgatga tgatgatgat
780
gatgtcattt tttgctccga gattctgccc acaaaggaga ctttgccgag taataacaca
840
gtggcacagg tccaatctaa cccaggccct gttgctattt cagatgttgc acctagtgtc
900
agcaataact cgcccccttt aacaaatata acacctactc agaaacttcc tactcctgtg
960
aatcaggcaa ctttgagcca aacacaagga agtgaaaaat tgttgggtatc ttcagctcca
1020
acacatctga ctccaatat tattttggtt aatcagacac cactttctac accaccaaat
1080
gtcagttctt cacttccaaa tcatatgccc tcttcaatca atttacttgt gcagaatcag
1140
cagacaccaa acagtgttat tttaacagga aacaaggcca atgaagagga ggaggaggaa
1200
ataatagatg atgatgatga cactatttagc tccagtcctg actcggccgt cagtaatata
1260
tctttggtcc cacaggctga tacctcccaa aataccagtt ttgatggatc attaatacag
1320
aagatgcaga ttctacact tcttcaagaa ccactttcca attccttaaa aatttcagat
1380

ttcaactgca caaaggctgt attgcagggg aggtgggagg gggcaggcag aacgctcctc
 60
 ctccctgggtc ttggggcccc ggagcagagc ccagggatgg gctgagttag gggcttggca
 120
 ctctgtggaa gctgcagatg agagaccagc aatgcatcag ctgcacctgc agtagagcgc
 180
 ggagatagcg ttggaccatg tcctaagatg tccccgctgc gcccgtgct gctggccctg
 240
 gcccttgccct ccgtgccttg cgcccagggc gcctgccccg cctccgccga cctcaagcac
 300
 tcggacggga cgcgcacttg cgccaagctc tatgacaaga gcgacccta ctatgagaac
 360
 tgctgcgggg gcgccagct gtcgctggag tcgggcgcag acctgcccta cctgccctcc
 420
 aactgggcca acaccgcctc ctacttctg gtggccccgc gctgcgagct caccgtgtgg
 480
 tcccggcaag gcaaggcggg caagacgcac aagttctctg ccggcaccta cccgcgcctg
 540
 gaggagtacc gccggggcat cttaggagac tggccaacg ctatctccgc gctctactgc
 600
 aggtgcagct gatgcattgc tggctctctca tctgcagctt ccacagagt ccaagcccct
 660
 cactcagccc atccctgggc tctgctccgg ggccccaaga cccaggagga ggagcgttct
 720
 gcctgcccc tcccacctc cctgcaatac agcctttgtg cagttgtaaa aaaaaaaaaa
 780
 a
 781

<210> 5054

<211> 156

<212> PRT

<213> Homo sapiens

<400> 5054

Glu	Thr	Ser	Asn	Ala	Ser	Ala	Ala	Pro	Ala	Val	Glu	Arg	Gly	Asp	Ser
1				5					10					15	
Val	Gly	Pro	Cys	Pro	Lys	Met	Ser	Pro	Leu	Arg	Pro	Leu	Leu	Leu	Ala
			20					25					30		
Leu	Ala	Leu	Ala	Ser	Val	Pro	Cys	Ala	Gln	Gly	Ala	Cys	Pro	Ala	Ser
		35					40					45			
Ala	Asp	Leu	Lys	His	Ser	Asp	Gly	Thr	Arg	Thr	Cys	Ala	Lys	Leu	Tyr
		50				55					60				
Asp	Lys	Ser	Asp	Pro	Tyr	Tyr	Glu	Asn	Cys	Cys	Gly	Gly	Ala	Glu	Leu
65					70				75					80	
Ser	Leu	Glu	Ser	Gly	Ala	Asp	Leu	Pro	Tyr	Leu	Pro	Ser	Asn	Trp	Ala
				85				90					95		
Asn	Thr	Ala	Ser	Ser	Leu	Val	Val	Ala	Pro	Arg	Cys	Glu	Leu	Thr	Val
			100					105					110		
Trp	Ser	Arg	Gln	Gly	Lys	Ala	Gly	Lys	Thr	His	Lys	Phe	Ser	Ala	Gly
		115					120					125			
Thr	Tyr	Pro	Arg	Leu	Glu	Glu	Tyr	Arg	Arg	Gly	Ile	Leu	Gly	Asp	Trp
		130				135					140				
Ser	Asn	Ala	Ile	Ser	Ala	Leu	Tyr	Cys	Arg	Cys	Ser				


```

65          70          75          80
Lys Ile Tyr Trp Phe Lys Asp Gly Lys Gln Ile Ser Pro Lys Ser Asp
85          90          95
His Tyr Thr Ile Gln Arg Asp Leu Asp Gly Thr Cys Ser Leu His Thr
100        105        110
Thr Ala Ser Thr Leu Asp Asp Asp Gly Asn Tyr Thr Ile Met Ala Ala
115        120        125
Asn Pro Gln Gly Arg Ile Ser Cys Thr Gly Arg Leu Met Val Gln Ala
130        135        140
Val Asn Gln Arg Gly Arg Ser Pro Arg Ser Pro Ser Gly His Pro His
145        150        155        160
Val Arg Arg Pro Arg Ser Arg Ser Arg Asp Ser Gly Asp Glu Asn Glu
165        170        175
Pro Ile Gln Glu Arg Phe Phe Arg Pro His Phe Leu Gln Ala Pro Gly
180        185        190
Asp Leu Thr Val Gln Glu Gly Lys Leu Cys Arg Met Asp Cys Lys Val
195        200        205
Ser Gly Leu Pro Thr Pro Asp Leu Ser Trp Gln Leu Asp Gly Lys Pro
210        215        220
Val Arg Pro Asp Ser Ala His Lys Met Leu Val Arg Glu Asn Gly Val
225        230        235        240
His Ser Leu Ile Ile Glu Pro Val Thr Ser Arg Asp Ala Gly Ile Tyr
245        250        255
Thr Cys Ile Ala Thr Asn Arg Ala Gly Gln Asn Ser Phe Ser Leu Glu
260        265        270
Leu Val Val Ala Ala Lys Glu Ala His Lys Pro Pro Val Phe Ile Glu
275        280        285
Lys Leu Gln Asn Thr Gly Val Ala Asp Gly Tyr Pro Val Arg Leu Glu
290        295        300
Cys Arg Val Leu Gly Val Pro Pro Pro Gln Ile Phe Trp Lys Lys Glu
305        310        315        320
Asn Glu Ser Leu Thr His Ser Thr Asp Arg Val Ser Met His Gln Asp
325        330        335
Asn His Gly Tyr Ile Cys Leu Leu Ile Gln Gly Ala Thr Lys Glu Asp
340        345        350
Ala Gly Trp Tyr Thr Val Ser Ala Lys Asn Glu Ala Gly Ile Val Ser
355        360        365
Cys Thr Ala Arg Leu Asp Val Tyr Thr Gln Trp His Gln Gln Ser Gln
370        375        380
Ser Thr Lys Pro Lys Lys Val Arg Pro Ser Ala Ser Arg Tyr Ala Ala
385        390        395        400
Leu Ser Asp Gln Gly Leu Asp Ile Lys Ala Ala Phe Gln Pro Glu Ala
405        410        415
Asn Pro Ser His Leu Thr Leu Asn Thr Ala Leu Val Glu Ser Glu Asp
420        425        430
Leu

```

<210> 5053

<211> 781

<212> DNA

<213> Homo sapiens

<400> 5053

ttgtgccata aagtattttt tcaaagacac caagatgtgg taaatgaaaa ttattagtgc
 3060
 acttccctgc tgccatgaaa ctttgcctta agaaggtgct ggattccaag gtttgtaaag
 3120
 gcatctcggt aaagactgct ttttgaatgc atatgatttt gcatcagcta gactgagttg
 3180
 attctgacca gacttgatgg ttttaagtcg gaaccgataa attttaaaaa ggagaaaaaa
 3240
 taatttgacc tagtagtata aaacatgagg ctttaatggg actttgctat gaaaagaaaa
 3300
 cactgtattc cttatgcaaa acacatgtat ctttcattat ttataagtgg cctctcttag
 3360
 ctcagtact caattcatac gtagtatttt ttaaaataat tttatatctg tgtaccaccc
 3420
 catatatttc atattactgt ttcacatgta cagctttcta cttctttgta agaacaccaa
 3480
 ccaaccaagg ttttaagtga taataggctt gagcaccggg tggcagatgt tctatgcagt
 3540
 gtggttcaag tttctttgac cgcacttata tgcattgcta atatggaatt taagatacca
 3600
 tacacagtct ctcattggacc tatctctatt gtagaattat gactttcggt gtcgaatgac
 3660
 cactgctgga tgtacctttt tttctgagct ctggtttgcc tttcttgact gtggccatca
 3720
 ccattgtcacc cacaccagca gcgggaagtc tggtcagccg tcccttgatc cccttcacgg
 3780
 agatgatata caggtttttg gctcctgtgt tgtcagcaca attgattaca gctcctaccg
 3840
 gaagacccaa ggaaatccgg aatttcgcac cagaggaccc accacgtcct cgcttcgaca
 3900
 tcttgaacgc cggaaaaaag aaaaaaggta catccagcag tggtcattcg acaacgaaag
 3960
 tcataccgta gaaaagatgg cgtgtttctt tattttgaag ataatgcagg agtcatagtg
 4020
 aacaataaag gcgagatgaa aggttctgcc attacaggac cagtagcaaa ggagtgtgac
 4080
 gacttggtgc cccggattgc atccaatgct ggcagcattg catgc
 4125

<210> 5052

<211> 433

<212> PRT

<213> Homo sapiens

<400> 5052

Leu Lys Leu Ser Leu Ile Gln Glu Tyr Lys Val Ser Ser Cys Glu Gln
 1 5 10 15
 Arg Leu Ile Ser Glu Ile Glu Tyr Arg Leu Glu Arg Ser Pro Val Asp
 20 25 30
 Glu Ser Gly Asp Glu Phe Thr Tyr Gly Asp Val Pro Val Glu Asn Gly
 35 40 45
 Met Ala Pro Phe Phe Glu Met Lys Leu Lys His Tyr Lys Ile Phe Glu
 50 55 60
 Gly Met Pro Val Thr Phe Thr Cys Arg Val Ala Gly Asn Pro Lys Pro

acaggagttg ctgatgggta cccagtgcgg ctggaatgtc gtgtattggg agtgccacca
1440
cctcagatat tttggaagaa agaaaatgaa tcactcactc acagcactga ccgagtgagc
1500
atgcaccagg acaaccacgg ctacatctgc ctgctcattc agggagccac aaaagaagat
1560
gctgggtggg atactgtgtc agccaagaat gaagcagggg ttgtgtcctg tactgccagg
1620
ctggacgttt acaccacgtg gcatcagcag tcacagagca ccaagccaaa aaaagtacgg
1680
ccctcagcca gtcgctatgc agcactttcg gaccagggac tagacatcaa agcagcgttc
1740
caacctgagg ccaaccctc tcacctgaca ctgaatactg ccttggtaga aagtgaggac
1800
ctgtaatcca gcattcttgt taaagctgaa aactgaaac agccattgcc ttgaccaaca
1860
tattcctttg tcacattatg taaaaggcag aacatacct ttgactataa gaaattaaaa
1920
aaaaacacca aaataatatt tttcttactt gatataccaa acttagttta agtagataat
1980
gctaatacaa atatacacat tgcacagaaa atacacattt actgtccaat ttaaaacttt
2040
ggaattgctg tgattaaagt gatcaaaatg ccaaataact aaaggaaatc aattgttcac
2100
aggttaactac aatttgtatt atctacaagt gcctttaaac acaagatata ggtgctgtgt
2160
agcctgatag tgtgaaatgt ttaatgaggg agttgtacca caaacagtac tacaatgatt
2220
ctgaagcaca gtgtattcag acagatacag tgaaccaagt gcaatatgta aggatgaaag
2280
aagaagagat gacaaagaaa tccaagtaaa tgccttgtct ttgcaaagt ttttatatta
2340
aatcataagg aaggaactac ttgccttaaa tgtaatatc aaaagagttt tctaacaagg
2400
ttaatacctt agttcttaac attttttttc tttatgtgta gtgttttcat gctacctgg
2460
taggaaactt atttacaaac catattaaaa ggctaattta aatataaata atataaagt
2520
ctctgaataa agcagaaata tattacagtt cattccacag aaagcatcca aaccacccaa
2580
atgaccaagg catatatagt atttggagga atcagggggt tggaaggagt agggaggaga
2640
atgaaggaaa atgcaaccag catgattata gtgtgttcat ttagataaaa gtagaaggca
2700
caggagaggt agcaaaggcc aggcttttct ttggttttct tcaaacatag gtgaaaaaaa
2760
cactgccatt cacaagtcaa ggaaccacgg gccagctgga agtgtggagc acacatgctg
2820
tgagcacac atgctgtgga gattgcagtg tgtctgaggt ttgtgtagta gtggaagatt
2880
ttaggtatgt agagcaagtt gaaaatggat tgagactgca tgggtggcata aatgagaaat
2940
tgctgtagc atctagtcta cttgaaggaa gtggagacat aaggagagac aaaaacagg
3000

610

615

<210> 5051

<211> 4125

<212> DNA

<213> Homo sapiens

<400> 5051

tttttttttc tattattctt ttactatttt ttctattacc attttttcta gtaccatttt
60
ttctattatt cttttactat aattgtatat aatatggcag ctgcttgcca catgtactat
120
gtggagagat gtaccaccct gcatcagctt ttaccctaca gaaggaaatc agcgttccat
180
tatattttat tgttatcaac agtttaggaa tacatagctt tgcttttgcc tttttcttc
240
cttccccttg tttcccctcg cctcagagaa aagaaggaaa aaaaaattca tctttcctac
300
ccccctcttt ttggatgata ggacttgaag acaatctgaa ataccacata aactcacttc
360
cagatgtttt ttgtttcata tgcaattgaa ttgggctcag actgtgtttt taagctgtat
420
ggtaaaaaata tcaactgtctt ctagggcctt attggggggc agggagagac gtgacacttt
480
gtcagaaggg attgagtctg ctaacttaaa ctttccttga ttcaggaata caaagtctcc
540
agctgtgaac agagactcat cagtgaata gagtacaggc tagaaaggtc tcctgtggat
600
gaatcaggtg atgaattcac gtatggagat gtgcctgtgg aaaacggaat ggcaccattc
660
tttgagatga agctgaaaca ttacaagatc tttaggggaa tgccagtaac tttcacatgt
720
agagtggctg gaaatccaaa gccaaagatc tattggttta aagatgggaa gcagatctct
780
ccaaagagtg atcactacac cattcaaaga gatctcgatg ggacctgctc cctccatacc
840
acagcctcca ccctagatga tgatgggaat tatacaatta tggtgcaaa ccctcagggc
900
cgcacagtt gtactggacg gctaattgta caggctgtca accaaagagg tcgaagtccc
960
cggctcctct caggccatcc tcatgtcaga aggcctcgtt ctagatcaag ggacagtggg
1020
gacgaaaatg aaccaattca ggagcgattc ttcagacctc acttcttgca ggctcctgga
1080
gatctgactg ttcaagaagg aaaactctgc agaatggact gcaaagtcag tgggttacca
1140
accccagatc taagctggca actagatgga aagcccgtac gccctgacag tgctcacaag
1200
atgctggtgc gtgagaacgg ggtgcactct ctgatcatag agccagtcac gtcacgtgat
1260
gccggcatct acacatgtat agctaccaac cgagcaggac agaactcatt cagcctggag
1320
cttgtggttg ctgctaaaga agcacacaaa cccctgtgtt ttattgagaa gctccaaaaa
1380

```

180      185      190
Ile Ile Leu Tyr Asp Ala Val Thr Glu Lys Leu Thr Arg Arg Glu Val
195      200      205
Glu Ala Lys Phe Cys Asn Leu Ser Val Ser Ser Asn Ser Xaa Val Ser
210      215      220
Thr Leu Gln Xaa Leu Leu Asn Arg Arg Glu Ile Xaa Ala Arg Ser Tyr
225      230      235      240
Ala Asn Asn Xaa Asn Ser Leu Ile Lys Gln Lys Thr Gly Ile Ala Gln
245      250      255
Leu Val Lys Tyr Gly Leu Lys Asp Leu Glu Glu Val Val Gly Leu Leu
260      265      270
Lys Lys Leu Gly Ile Lys Leu Gln Val Leu Ile Asn Leu Gly Leu Val
275      280      285
Tyr Lys Val Gln Gln His Asn Gly Ile Ile Phe Gln Phe Val Ala Phe
290      295      300
Ile Lys Arg Arg Gln Arg Ala Val Pro Glu Ile Leu Ala Ala Gly Gly
305      310      315      320
Arg Tyr Asp Leu Leu Ile Pro Gln Phe Arg Gly Pro Gln Ala Leu Gly
325      330      335
Pro Val Pro Thr Ala Ile Gly Val Ser Ile Ala Ile Asp Lys Ile Ser
340      345      350
Ala Ala Val Leu Asn Met Glu Glu Ser Val Thr Ile Ser Ser Cys Asp
355      360      365
Leu Leu Val Val Ser Val Gly Gln Met Ser Met Ser Arg Ala Ile Asn
370      375      380
Leu Thr Gln Lys Leu Trp Thr Ala Gly Ile Thr Ala Glu Ile Met Tyr
385      390      395      400
Asp Trp Ser Gln Ser Gln Glu Glu Leu Gln Glu Tyr Cys Arg His His
405      410      415
Glu Ile Thr Tyr Val Ala Leu Val Ser Asp Lys Glu Gly Ser His Val
420      425      430
Lys Val Lys Ser Phe Glu Lys Glu Arg Gln Thr Glu Lys Arg Val Leu
435      440      445
Glu Thr Glu Leu Val Asp His Val Leu Gln Lys Leu Arg Thr Lys Val
450      455      460
Thr Asp Glu Arg Asn Gly Arg Glu Ala Ser Asp Asn Leu Ala Val Gln
465      470      475      480
Asn Leu Lys Gly Ser Phe Ser Asn Ala Ser Gly Leu Phe Glu Ile His
485      490      495
Gly Ala Thr Val Val Pro Ile Val Ser Val Leu Ala Pro Glu Lys Leu
500      505      510
Ser Ala Ser Thr Arg Arg Arg Tyr Glu Thr Gln Val Gln Thr Arg Leu
515      520      525
Gln Thr Ser Leu Ala Asn Leu His Gln Lys Ser Ser Glu Ile Glu Ile
530      535      540
Leu Ala Val Asp Leu Pro Lys Glu Thr Ile Leu Gln Phe Leu Ser Leu
545      550      555      560
Glu Trp Asp Ala Asp Glu Gln Ala Phe Asn Thr Thr Val Lys Gln Leu
565      570      575
Leu Ser Arg Leu Pro Lys Gln Arg Tyr Leu Lys Leu Val Cys Asp Glu
580      585      590
Ile Tyr Asn Ile Lys Val Glu Lys Val Ser Val Leu Phe Leu Tyr
595      600      605
Ser Tyr Arg Asp Asp Tyr Tyr Arg Ile Leu Phe

```

ccaaagcaaa gatacctcaa attagtctgt gatgaaattt ataacatcaa agtagaaaaa
 1800
 aagggtgctg tgctatttct gtacagctat agagatgact actacagaat cttattttta
 1860
 ccctaaagaa ctgtcggttaa cctcattcaa acagacagag gcttatactg gaataatgga
 1920
 atgttgtaga ttcatcataa tttaaaatta aattctaaga agaggctggg tgcagtgggt
 1980
 cacaccttta atcccagcac tttgggaagc caaggcagga agactgcttg aaaccaggag
 2040
 tttgagacca gcttgagcaa caaagcaaga ccccatctct ataaaaacta aaaaaattag
 2100
 ttgggcatgg tggcacatgc ctgtagtccc agctactcca gaggctgaga tggatcatct
 2160
 gaggctcagg aggttgaggc tgcagtgagc tgtgactgag ccactgcact ccagtctggg
 2220
 acaacagagc aagaccctgt cttaaaaaaa aaaagaaaaa aaaaattttt ttctaagaag
 2280
 ctgtcctaca aagttgagct ttgttagttt ttcattgtga atatattata aatttatctt
 2340
 ttgggatata ataatgctt tcatataaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2400
 aaaaaaaaaa aaaaaaaaaa aa
 2422

<210> 5050

<211> 619

<212> PRT

<213> Homo sapiens

<400> 5050

Xaa	Ile	Phe	Ser	Gln	Arg	Ile	Ser	Pro	Ser	Ile	Asp	Tyr	Thr	Tyr	Asp
1				5				10						15	
Ser	Asp	Ile	Leu	Lys	Gly	Asn	Phe	Ser	Ile	Arg	Thr	Ala	Lys	Met	Gln
			20					25					30		
Gln	His	Val	Cys	Glu	Thr	Ile	Ile	Arg	Ile	Phe	Lys	Arg	His	Gly	Ala
		35						40				45			
Val	Gln	Leu	Cys	Thr	Pro	Leu	Leu	Pro	Arg	Asn	Arg	Gln	Ile	Tyr	
	50					55				60					
Glu	His	Asn	Glu	Ser	Ala	Leu	Phe	Met	Asp	His	Ser	Gly	Met	Leu	Val
65					70					75				80	
Met	Leu	Pro	Phe	Asp	Leu	Arg	Ile	Pro	Phe	Ala	Arg	Tyr	Val	Ala	Arg
				85					90					95	
Asn	Asn	Ile	Leu	Asn	Leu	Lys	Arg	Tyr	Cys	Ile	Glu	Arg	Val	Phe	Arg
			100					105					110		
Pro	Arg	Lys	Leu	Asp	Arg	Phe	His	Pro	Lys	Glu	Leu	Leu	Glu	Cys	Ala
		115					120					125			
Phe	Asp	Ile	Val	Thr	Ser	Thr	Thr	Asn	Ser	Phe	Leu	Pro	Thr	Ala	Glu
	130					135					140				
Ile	Ile	Tyr	Thr	Ile	Tyr	Glu	Ile	Ile	Gln	Glu	Phe	Pro	Ala	Leu	Gln
145				150					155					160	
Glu	Arg	Asn	Tyr	Ser	Ile	Tyr	Leu	Asn	His	Thr	Met	Leu	Leu	Lys	Ala
				165				170						175	
Ile	Leu	Leu	His	Cys	Gly	Ile	Pro	Glu	Asp	Lys	Leu	Ser	Gln	Val	Tyr

cgcatcttta aaagacatgg agctgttcag ttgtgtactc cactactgct tccccgaaac
180
agacaaatat atgagcacia cgaatctgcc ctattcatgg accacagcgg gatgctggtg
240
atgcttcctt ttgacctgcg gatccctttt gcaagatatg tggcaagaaa taatatattg
300
aatttaaaac gatactgcat agaactgttg ttcaggccgc gcaagttaga tgcatttcat
360
cccaaagaac ttctggagtg tgcatttgat attgtcactt ctaccaccaa cagctttctg
420
cccactgctg aaattatcta cactatctat gaaatcatcc aagagtttcc agcacttcag
480
gaaagaaatt acagtattta tttgaaccat accatgttat tgaaagcaat actcttacac
540
tgtgggatcc cagaagataa actcagtcaa gtctacatta ttctgtatga tgctgtgaca
600
gagaagctga cgaggagaga agtggaagct aaattttgta atctgtctgt gtcttcta
660
agtntgtgt cgactctaca angtttattg aacagaaggg agattntgc aagatcttat
720
gccaacaatn naaattcatt aataaaacag aaaacaggta ttgcacagtt ggtgaagtat
780
ggcttaaaag acctagagga ggttggttga ctggtgaaga aactcggcat caagttacag
840
gtcttgatca atttgggctt ggtttacaag gtgcagcagc acaatggaat catcttccag
900
tttgtggctt tcatcaaagc aaggcaaagg gctgtacctg aaatcctcgc agctggaggc
960
agatatgacc tgctgattcc ccagtttaga gggccacaag ctctggggcc agttccact
1020
gccattgggg tcagcatagc tatagacaag atatctgctg ctgtcctcaa catggaggaa
1080
tctgttacaa taagctcttg tgacctctg gttgtaagtg ttggtcagat gtctatgtcc
1140
agggccatca acctaaccca gaaactctgg acagcaggca tcacagcaga aatcatgtac
1200
gactggtcac agtcccaaga ggaattacaa gactactgca gacatcatga aatcacctat
1260
gtggcccttg tctcggataa agaaggaagc catgtcaagg ttaagtcttt cgagaaggaa
1320
aggcagacag agaagcgtgt gctggagact gaacttggtg accatgtact gcagaaactg
1380
aggactaaag tcaactgatga aaggaatggc agagaagctt ccgataatct tgcagtgcaa
1440
aatctgaagg ggtcattttc taatgcttca ggtttggttg aaatccatgg agcaacagt
1500
gttcccattg tgagtgtgct agccccggag aagctgtcag ccagcactag gaggcgctat
1560
gaaactcagg taaaaactc acttcagacc tcccttgcca acttacatca gaaaagcagt
1620
gaaattgaaa ttctggctgt ggatctaccc aaagaaacaa tattacagtt tttatcatta
1680
gagtgggatg ctgatgaaca ggcatttaac acaactgtga agcagctgct gtcacgcctg
1740

```
<210> 5049
<211> 2422
<212> DNA
<213> Homo sapiens
```

4231

gttaataagt aaagcctggt gaaatttaca tgtcaattac ctttcatagt catgggccga
 2400
 aaacagctag aacagctgta aatctggtac attttccttc cctcctcatc tacacgcacc
 2460
 cacatcttca cacacactca tgccctctt tcacacgcag tttgctgcac acagtgggat
 2520
 ttagcagata gaatgcattc tcttgtcctg tgtagtccaa taagacattt actgaacacc
 2580
 tgggtactatc tatgctaaat gctctgaata gctctctagg tgcaaagaga agagtaaggc
 2640
 atgggtcccag atcagtggaa cttagggtttt aagaatgttc atttactata cattctgtga
 2700
 cgaagcctaa aataaactta gcctaccatc tctatagggt ttataaaatt tgcaaaagta
 2760
 atcctttctc agtaaatcca agtaatggaa atgtatatga aaaaagttaa cttctttgtt
 2820
 cttcaccagt cccactgcgt ggagctaact gccataaaca gtttgcttta tatgggtccc
 2880
 gggtttttcca ttctgggatg atgatgtagc tatataaata gatttagaag aacaaagaca
 2940
 ggatggtact gacataggat tttgtaacgt gcttctccaa acgaacaaaa tggatctctt
 3000
 tgcatttcag cacttacaga tttgcctcat tctatttaga ggcagaatat tgcattggat
 3060
 gcatgtcatc atggactcgg tacttctatt tatggacagg aggttttttt tcccagtttg
 3120
 ctgctattac aaacaatgcc acaatgaatg atctgaaaca taaaactttg cgttgtgtgg
 3180
 tagcattttg gggaatagat tcttggaagt gcaatttcaa gatccaatag tgggaatatt
 3240
 tttaaaattt gaataaatat agccacattt ccttttgtaa aaaaaaaaaa aaaactgcat
 3300
 cagatacaaa taagatagat ataatagtat ttgctttcct ctcctcata acgttgatt
 3360
 atcattaaaa tgtttttggc
 3380

<210> 5048

<211> 429

<212> PRT

<213> Homo sapiens

<400> 5048

Gly	Ser	Arg	Ser	Ser	Glu	Arg	Phe	Cys	Ser	Pro	Gly	Lys	Gly	Arg	Xaa
1				5					10					15	
Leu	Arg	Ala	Leu	Gln	Pro	Phe	Gln	Val	Gly	Asp	Leu	Leu	Phe	Ser	Cys
			20					25					30		
Pro	Ala	Tyr	Ala	Tyr	Val	Leu	Thr	Val	Asn	Glu	Arg	Gly	Asn	His	Cys
			35					40					45		
Glu	Tyr	Cys	Phe	Thr	Arg	Lys	Glu	Gly	Leu	Ser	Lys	Cys	Gly	Arg	Cys
			50				55				60				
Lys	Gln	Ala	Phe	Tyr	Cys	Asn	Val	Glu	Cys	Gln	Lys	Glu	Asp	Trp	Pro
65						70				75				80	
Met	His	Lys	Leu	Glu	Cys	Ser	Pro	Met	Val	Val	Phe	Gly	Glu	Asn	Trp

tacccaacgg aagatagaaa tgaccgggta agagattctt atttctttac ctgtgagtgc
780
caggagtgtg ccaccaagga caaggataag gccaaagtgg aaatccggaa gctcagcgat
840
cccccaaagg cagaagccat ccgagacatg gtcagatatg cacgcaacgt cattgaagag
900
ttccggaggg ccaagcacta taaatccctt agtgagctgc tggagatctg cgagctcagc
960
caggagaaga tgagctctgt gtttgaggac agtaacgtgt acatgttgca catgatgtac
1020
caggccatgg gtgtctgctt gtacatgcag gactgggaag gagccctgca atatggacag
1080
aaaatcatta agccctacag taagcactat cctttgtact ccctcaacgt ggcctccatg
1140
tggttgaagc tagggagact ctacatgggc ctggaacaca aagccgcagg ggagaaagcc
1200
ctgaagaagg ccattgcaat catggaagta gctcacggca aagatcatcc atatatctt
1260
gagatcaaac aggaaattga aagccactga aactatgcag catttcagtt ttcatttaaa
1320
cacttagttc agaaacctta aaggatttga atatttcaa ttgcacacgt cactccagca
1380
tctctgtaaa ataattggaa tgaaaatact tcttgcaact aaacactgca catgccgtac
1440
tttgaggtta gtctgaatct tgaactttaa taccaaatta attttgaatg cttttgtttc
1500
ctaagagata atggcatggt ttcatatggt atactttgga cagacagagt tttaaaaatg
1560
gaattatctt ttctttcatg cctcttgtaa tgttctgaac aaacttgaat gatgaaagta
1620
ttaagagat atcagtattt gaggtttgta ttttcttctg tctctgggga ggatttctca
1680
gtggtggtgg gagccagtc ttggagtga agtgacacct gctgtccata attcagcaag
1740
ctcaagtctt ctccatggga ctggggctcg gcagcctctt tattctgcag ttgctcttgt
1800
ggggctgtgc ctgtggagga agaaaatggg aagaaagaga aaaaggtaca caaaggaaag
1860
aaaactatca tctatctgtg gtggaggaac agtccagtga cccaagtgcc ctccagcagg
1920
cgaggttttg aatctgttct ctggtgctg gtattccttc agtgtgtaaa ggtgcttagt
1980
gcgtgctttg ctttcttggc ttttctgtcc ccatctgtct gaaagcagac ttgccatctc
2040
tcattctggt gattgttctg tgcagtactc tcctttttgg aaaaactcca gggatgctt
2100
gggaaggaaa aaaatTTTTT tccttaccaa ccaacgctgt gttgttgagt aaacactgat
2160
ctctaccac acagacaaca ggaatccagc tttctgcagc cccacagcct agacagcagc
2220
aacctgggga gttgtttgtt agcaaccatt gcacagaagg acgcagcaca cgttcctgag
2280
tgagggggtg ttactcttag aaaagcgtct tgtagtcgaa agagaggaac ttccccactg
2340

ctagtaagca ctatcctttg tactccctca acgtggcctc catgtggttg aagctagggg
 420
 gactctacat gggcctggaa cacaaagccg ctagggatga aa
 462

<210> 5046
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 5046
 Met Ile Arg Gln Gly Gly Ser Ile His Ala Leu His Pro Asn Pro Gly
 1 5 10 15
 Gly Ile Trp Arg Gly Arg Trp Trp Ala Glu Val Gly Pro Lys His Gly
 20 25 30
 Ser Leu Arg Leu Thr Ala Pro Ser Leu Trp Gly Gly Ser Val Ala Arg
 35 40 45
 Asp Met Val Ala Cys Cys Leu Phe Ser Cys Ser Ser Lys His Tyr Pro
 50 55 60
 Leu Tyr Ser Leu Asn Val Ala Ser Met Trp Leu Lys Leu Gly Arg Leu
 65 70 75 80
 Tyr Met Gly Leu Glu His Lys Ala Ala Arg Asp Glu
 85 90

<210> 5047
 <211> 3380
 <212> DNA
 <213> Homo sapiens

<400> 5047
 ggggtcgcggt cctcggagcg cttctgcagc ccgggcaaag gccggnngct gcgggctctg
 60
 cagcccttcc aggtggggga cttgctgttc tcctgcccg cctatgccta cgtgctcacg
 120
 gtcaacgagc ggggcaacca ctgcgagtag tgcttcacca ggaaagaagg attgtccaaa
 180
 tgtggaagat gcaagcaggc attttactgc aatgtggagt gtcagaaaga agattggccc
 240
 atgcacaagc tggaatgttc tcccatgggt gtttttgggg aaaactggaa tccctcggag
 300
 actgtaagac taacagcaag gattctggcc aaacagaaaa tccaccaga gagaacacct
 360
 tcggaaaaat tgtagctgt gaaggagttt gaatcacatc tggataagtt agacaatgag
 420
 aagaaggatt tgattcagag tgacatagct gctctccatc acttttactc caagcatctc
 480
 gaattccctg acaatgatag cctcgtagta ctctttgcac aggttaactg taatggcttc
 540
 acaattgaag atgaagaact ttctcatttg ggatcagcga tatttcctga tgttgcatcg
 600
 atgaatcata gctgttgccc caatgtcatt gtgacctaca aagggaccct ggcagaagtc
 660
 agagctgtac aggaaatcaa gccgggagag gaggttttta ccagctatat tgatctcctg
 720

```

      1           5           10           15
Lys Asp Cys Gly Gln Asp Arg Arg Ala Pro Gly Val Gln Pro Cys Arg
      20           25           30
Leu Val Thr Met Thr Ser Val Val Lys Thr Val Tyr Ser Leu Gln Pro
      35           40           45
Pro Ser Ala Leu Ser Gly Gly Gln Pro Ala Asp Thr Gln Thr Arg Ala
      50           55           60
Thr Ser Lys Ser Leu Leu Pro Val Arg Ser Lys Glu Val Asp Val Ser
65      70      75      80
Lys Gln Leu His Ser Gly Gly Pro Glu Asn Asp Val Thr Lys Ile Thr
      85           90           95
Lys Leu Arg Arg Glu Asn Gly Gln Met Lys Ala Thr Asp Thr Ala Thr
      100          105          110
Arg Arg Asn Val Arg Lys Gly Tyr Lys Pro Leu Ser Lys Gln Lys Ser
      115          120          125
Glu Glu Glu Leu Lys Asp Lys Asn Gln Leu Leu Glu Ala Val Asn Lys
      130          135          140
Gln Leu His Gln Lys Leu Thr Glu Thr Gln Gly Glu Leu Lys Asp Leu
145      150      155      160
Thr Gln Lys Val Glu Leu Leu Glu Lys Phe Arg Asp Asn Cys Leu Ala
      165          170          175
Ile Leu Glu Ser Lys Gly Leu Asp Pro Ala Leu Gly Ser Glu Thr Leu
      180          185          190
Ala Ser Arg Gln Glu Ser Thr Thr Asp His Met Asp Ser Met Leu Leu
      195          200          205
Leu Glu Thr Leu Gln Glu Glu Leu Lys Leu Phe Asn Glu Thr Ala Lys
      210          215          220
Lys Gln Met Glu Glu Leu Gln Ala Leu Lys Val Lys Leu Glu Met Lys
225      230      235      240
Glu Glu Arg Val Arg Phe Leu Glu Gln Gln Thr Leu Cys Asn Asn Gln
      245          250          255
Val Asn Asp Leu Thr Thr Ala Leu Lys Glu Met Glu Gln Leu Leu Glu
      260          265          270
Met

```

<210> 5045

<211> 462

<212> DNA

<213> Homo sapiens

<400> 5045

```

cataaatggg acatttactt cacaagctgt tttcccaggg tcttcctctg ggtatgtctg
60
aaatataaaa atctggactg ggattgaaga ttgtgtttac aaatgctttt gaataggatt
120
tctcctgcag ttgttacgta gcttttcaga aacacacaaa ctacaaataa tgaacaacat
180
ctgcaatgat tcggcagggt ggcagcatcc acgctctcca cccaaaccct ggtgggattt
240
ggagaggccg ctggtgggca gaggttgcc ctaagcatgg cagcctccgg cttactgcac
300
ccagcctgtg gggcggtcga gtagccctg acatggtggc ctgttgtctc ttctcttgtt
360

```

accagaagg tagagctgct ggagaagttt cgggacaact gtttggcaat tttggagagc
540
aagggccttg atccagcttt aggcagtgag accctggcat cagacaaga atccactact
600
gatcacatgg actctatggt gctgttagaa actttgcaag aggagctgaa gctttttaac
660
gaaacagcca aaaagcagat ggaggagtta caggccttaa aggtaaagct ggagatgaaa
720
gaggaaagag tccgattcct agaacagcaa accttatgta acaatcaagt aaatgattta
780
acaacagccc ttaaggaaat ggagcagcta ttagaaatgt aagaagaagc aagtggccag
840
atggctccct cttgggcata aaatctcaga ggaagctact taggacatca tcttggccat
900
gatcttctgg gactcaccat ctccagaatg aaaacaattt ctacagtaga cttaggaca
960
gtttatgctg aaatggcaat tcttcattta agcaagtttt cccaaccttc aggttggta
1020
gccctcctga gcctcacagg tggataattg aggcctacaa gagaggggag cctaggagct
1080
tggattgacc ttctagtcaa ccacctgact tcagcacacc attacaatcg ggagactaaa
1140
ccaacaacca gaggatctaa aatgtcacat tcagattttc aggaagaaaa tcttcattac
1200
agtggagcac aaatgttcca tacaagacat cattgaggag ccatgctgtc ccttctaac
1260
ctgaaacaca ttctttccca tcttggttgg gcttctgtac ctcttatta atttatgaac
1320
ctgaagttgc ttgaagtgtt ttgggcttaa taaatggggt gaaagtatag gtagcagtaa
1380
cacctacatg aaacaatata ccttggatct tttaatctaa attacttttc ttttttaagt
1440
ctacttttaa aataaatact tctgtaaata ttctgactgt aacattgaga aatgaaaata
1500
gccttttaac ctagatatgt cagttgatca ttattgaact aatttagtta acaagtccea
1560
gatattctga cttaatctag aatatttttc tgctactctt taagagtcct gtggctagtc
1620
cctctgtctc ccaagagcat tggctagtct cctgaggggt ttgccattt gtagcagtgg
1680
tttcaccagg tctgtggcca cttgtgtccc atgttttccc tgcactccag cctgggtgac
1740
aagagcaaga ctccatctct aaataaataa ataaataaat aaataaataa ataaataaat
1800
aaaatagttg aaatggcaaa cttt
1824

<210> 5044

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5044

Ala Gly Gly Thr Thr Val Ala Ala Gly Asn Leu Leu Asn Glu Ser Glu

435	440	445
Gln Glu Ala Ser Ala Leu Arg Glu Glu Thr Glu Ala Trp Ala Arg Pro		
450	455	460
His Glu Ser Leu Ala Arg Glu Glu Ala Leu Thr Ala Leu Gly Lys Leu		
465	470	475
Leu Tyr Leu Leu Asp Gly Met Leu Asp Gly Gln Val Asn Ser Gly Ile		
485	490	495
Ala Ala Thr Pro Ala Ser Ala Ala Ala Thr Leu Asp Val Ala Val		
500	505	510
Arg Arg Gly Leu Ser His Gly Ala Gln Arg Leu Leu Cys Val Ala Leu		
515	520	525
Gly Gln Leu Asp Arg Pro Pro Asp Leu Ala His Asp Gly Arg Ser Leu		
530	535	540
Trp Leu Asn Ile Arg Gly Lys Glu Ala Ala Ala Leu Ser Met Phe His		
545	550	555
Val Ser Thr Pro Leu Pro Val Met Thr Gly Gly Phe Leu Ser Cys Ile		
565	570	575
Leu Gly Leu Val Leu Pro Leu Ala Tyr Gly Phe Gln Pro Asp Leu Val		
580	585	590
Leu Val Ala Leu Gly Pro Gly His Gly Leu Gln Gly Pro His Ala Ala		
595	600	605
Leu Leu Ala Ala Met Leu Arg Gly Leu Ala Gly Gly Arg Val Leu Ala		
610	615	620
Leu Leu Glu Glu Asn Ser Thr Pro Gln Leu Ala Gly Ile Leu Ala Arg		
625	630	635
Val Leu Asn Gly Glu Ala Pro Pro Ser Leu Gly Pro Ser Ser Val Ala		
645	650	655
Ser Pro Glu Asp Val Gln Ala Leu Met Tyr Leu Arg Gly Gln Leu Glu		
660	665	670
Pro Gln Trp Lys Met Leu Gln Cys His Pro His Leu Val Ala		
675	680	685

<210> 5043

<211> 1824

<212> DNA

<213> Homo sapiens

<400> 5043

gccggtggca cgacagttgc tgcaggggaat cttttaaacg agagcgagaa ggactgcggg
 60
 caggaccggc gggctcctgg gggtcagccg tgccgcctcg ttacgatgac cagtgtggtt
 120
 aagacagtgt atagcctgca gccccctct gcgctgagcg gcggccagcc ggcagacaca
 180
 caaactcggg ccacttctaa gagtctctta cctgttaggt ccaaagaagt cgatgtttcc
 240
 aaacagcttc attcaggagg tccagagaat gatgttataa aaatcaccaa actgagacga
 300
 gagaatgggc aaatgaaagc tactgacact gccaccagaa ggaatgtcag aaaaggctac
 360
 aaaccactga gtaagcaaaa atcagaggaa gagctcaagg acaagaacca gctgttagaa
 420
 gccgtcaaca agcagttgca ccagaagttg actgaaactc agggagagct gaaggacctg
 480

```

1           5           10           15
Ala Leu Val Tyr His Glu Asp Met Thr Ala Thr Arg Leu Leu Trp Asp
20           25           30
Asp Pro Glu Cys Glu Ile Glu Arg Pro Glu Arg Leu Thr Ala Ala Leu
35           40           45
Asp Arg Leu Arg Gln Arg Gly Leu Glu Gln Arg Cys Leu Arg Leu Ser
50           55           60
Ala Arg Glu Ala Ser Glu Glu Glu Leu Gly Leu Val His Ser Pro Glu
65           70           75           80
Tyr Val Ser Leu Val Arg Glu Thr Gln Val Leu Gly Lys Glu Glu Leu
85           90           95
Gln Ala Leu Ser Gly Gln Phe Asp Ala Ile Tyr Phe His Pro Ser Thr
100          105          110
Phe His Cys Ala Arg Leu Ala Ala Gly Ala Gly Leu Gln Leu Val Asp
115          120          125
Ala Val Leu Thr Gly Ala Val Gln Asn Gly Leu Ala Leu Val Arg Pro
130          135          140
Pro Gly His His Gly Gln Arg Ala Ala Ala Asn Gly Phe Cys Val Phe
145          150          155          160
Asn Asn Val Ala Ile Ala Ala Ala His Ala Lys Gln Lys His Gly Leu
165          170          175
His Arg Ile Leu Val Val Asp Trp Asp Val His His Gly Gln Gly Ile
180          185          190
Gln Tyr Leu Phe Glu Asp Asp Pro Ser Val Leu Tyr Phe Ser Trp His
195          200          205
Arg Tyr Glu His Gly Arg Phe Trp Pro Phe Leu Arg Glu Ser Asp Ala
210          215          220
Asp Ala Val Gly Arg Gly Gln Gly Leu Gly Phe Thr Val Asn Leu Pro
225          230          235          240
Trp Asn Gln Val Gly Met Gly Asn Ala Asp Tyr Val Ala Ala Phe Leu
245          250          255
His Leu Leu Leu Pro Leu Ala Phe Glu Phe Asp Pro Glu Leu Val Leu
260          265          270
Val Ser Ala Gly Phe Asp Ser Ala Ile Gly Asp Pro Glu Gly Gln Met
275          280          285
Gln Ala Thr Pro Glu Cys Phe Ala His Leu Thr Gln Leu Leu Gln Val
290          295          300
Leu Ala Gly Gly Arg Val Cys Ala Val Leu Glu Gly Gly Tyr His Leu
305          310          315          320
Glu Ser Leu Ala Glu Ser Val Cys Met Thr Val Gln Thr Leu Leu Gly
325          330          335
Asp Pro Ala Pro Pro Leu Ser Gly Pro Met Ala Pro Cys Gln Arg Cys
340          345          350
Glu Gly Ser Ala Leu Glu Ser Ile Gln Ser Ala Arg Ala Ala Gln Ala
355          360          365
Pro His Trp Lys Ser Leu Gln Gln Gln Asp Val Thr Ala Val Pro Met
370          375          380
Ser Pro Ser Ser His Ser Pro Glu Gly Arg Pro Pro Pro Leu Leu Pro
385          390          395          400
Gly Gly Pro Val Cys Lys Ala Ala Ala Ser Ala Pro Ser Ser Leu Leu
405          410          415
Asp Gln Pro Cys Leu Cys Pro Ala Pro Ser Val Arg Thr Ala Val Ala
420          425          430
Leu Thr Thr Pro Asp Ile Thr Leu Val Leu Pro Pro Asp Val Ile Gln

```

tgcttcgccc acctcacaca gctgctgcag gtgctggccg gcggccgggt ctgtgccgtg
1200
ctggagggcg gctaccacct ggagtcactg gcggagtcag tgtgcatgac agtacagacg
1260
ctgctgggtg acccgccccc acccctgtca gggccaatgg cgccatgtca gaggtgcgag
1320
gggagtgtcc tagagtccat ccagagtgcc cgtgctgtccc aggccccgca ctggaagagc
1380
ctccagcagc aagatgtgac cgctgtgccg atgagcccca gcagccactc cccagagggg
1440
aggcctccac ctctgctgcc tgggggtcca gtgtgtaagg cagctgcac tgcaccgagc
1500
tccctcctgg accagccgtg cctctgtccc gcaccctctg tccgcaccgc tgttgccctg
1560
acaacgccgg atatcacatt ggttctgtccc cctgacgtca tccaacagga agcgtcagcc
1620
ctgagggagg agacagaagc ctggggccagg ccacacgagt ccctggcccc ggaggaggcc
1680
ctcactgcac ttgggaagct cctgtacctc ttagatggga tgctggatgg gcaggtgaac
1740
agtggatatag cagccactcc agcctctgct gcagcagcca ccctggatgt ggctgttcgg
1800
agaggcctgt cccacggagc ccagaggctg ctgtgcgtgg ccctgggaca gctggaccgg
1860
cctccagacc tcgcccata gaaggaggag ctgtggctga acatcagggg caaggaggcg
1920
gctgccctat ccattgtcca tgtctccacg ccactgccag tgatgaccgg tggtttctg
1980
agctgcatct tgggcttggg gctgcccctg gcctatggct tccagcctga cctgggtgctg
2040
gtggcgctgg ggctggcca tggcctgcag ggccccacg ctgcactcct ggctgcaatg
2100
cttcgggggc tggcaggggg ccgagtcctg gccctcctgg aggagaactc cacaccccag
2160
ctagcagggg tcttgggccc ggtgctgaat ggagaggcac ctctagcct aggcccttcc
2220
tctgtggcct ccccagagga cgtccaggcc ctgatgtacc tgagagggca gctggagcct
2280
cagtgaaga tgttgagtg ccactctcac ctggtggctt gaaatcggcc aaggtgggag
2340
catttacacc gcagaaatga caccgcacgc cagcgccccg cggccgcgat ccggacccca
2400
agccacggc tccctcgact ctggggcacg gaaccccgcc cactcccaat ccctggcgcg
2460
c
2461

<210> 5042

<211> 686

<212> PRT

<213> Homo sapiens

<400> 5042

Arg Gly Arg Leu Gly Thr Gln Gly Asp His Gly Ala Ala Met Gly Thr

545		550		555		560									
Leu	Glu	Arg	Phe	Ala	Gln	Val	Leu	Glu	Lys	Glu	Leu	Pro	Leu	Tyr	Ala
		565		570		575									
Arg	Pro	Ile	Phe	Leu	Arg	Leu	Leu	Pro	Glu	Leu	His	Lys	Thr	Gly	Thr
		580		585		590									
Tyr	Lys	Phe	Gln	Lys	Thr	Glu	Leu	Arg	Lys	Glu	Ala	Phe	Asp	Pro	Ala
		595		600		605									
Ile	Val	Lys	Thr	Arg	Cys	Ser	Ile								
	610			615											

<210> 5041

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 5041

```

ctcgcgatag cgaccgggag cagggcgcg ggcgggaccc aggtccgagg cgaggaagcc
60
ggaagccagg cgcggggagc ctcccccttc gactgcagcc tcgctccgtg ccttctgcgc
120
gcctgggatc ccggagcctg cctaggttct gtgcgtccc gccaggccg gtgcccgcgc
180
ccgcctgcg cccaggcag gtcccaggcc tccggctgct cccggccgaa ggtggggaca
240
ggcagtggca ggcaccacta gcgaggcgt ttgggaaccc agggtagaca cggcgagcc
300
atggggaccg cgcttggtta ccatgaggac atgacggcca cccggctgct ctgggacgac
360
cccagtgctg agatcgagcg tctgagcgc ctgaccgag ccctggatcg cctgcggcag
420
cgcggcctgg aacagaggtg tctgcggttg tcagcccgcg aggcctcgga agaggagctg
480
ggcctgggtg acagcccaga gtatgtatcc ctggtcaggg agaccagggt cctaggcaag
540
gaggagctgc aggcgtgtc cggacagttc gacgccatct acttccacc gagtaccttt
600
cactgcgcgc ggctggccgc aggggctgga ctgcagctgg tggacgctgt gctcactgga
660
gctgtgcaaa atgggcttgc cctggtagag cctcccgggc accatggcca gagggcggct
720
gccaacgggt tctgcgtgtt caacaacgtg gccatagcag ctgcacatgc caagcagaaa
780
cacgggctac acaggatcct cgtcgtggac tgggatgtgc accatggcca ggggatccag
840
tatctctttg aggatgacct cagcgtcctt tacttctcct ggcaccgcta tgagcatggg
900
cgcttctggc ctttctgcg agagtcagat gcagacgag tggggcgggg acagggcctc
960
ggcttcactg tcaacctgcc ctggaaccag gttgggatgg gaaacgctga ctacgtggct
1020
gccttcctgc acctgctgct cccactggcc tttgagtttg accctgagct ggtgctggtc
1080
tcggcaggat ttgactcagc catcggggac cctgaggggc aaatgcaggc cagccagag
1140

```

```

115      120      125
Ala Ala Ile Phe Met Glu Asn Arg Asn Glu Phe Val Gly Leu Trp Leu
130      135      140
Gly Met Ala Lys Leu Gly Val Glu Ala Ala Leu Ile Asn Thr Asn Leu
145      150      155      160
Arg Arg Asp Ala Leu Leu His Cys Leu Thr Thr Ser Arg Ala Arg Ala
165      170      175
Leu Val Phe Gly Ser Glu Met Ala Ser Ala Ile Cys Glu Val His Ala
180      185      190
Ser Pro Asp Pro Ser Leu Ser Leu Phe Cys Ser Gly Ser Trp Glu Pro
195      200      205
Gly Ala Val Pro Pro Ser Thr Glu His Leu Asp Pro Leu Leu Lys Asp
210      215      220
Ala Pro Lys His Leu Pro Ser Cys Pro Asp Lys Gly Phe Thr Asp Lys
225      230      235      240
Leu Phe Tyr Ile Tyr Thr Ser Gly Thr Thr Gly Leu Pro Lys Ala Ala
245      250      255
Ile Val Val His Ser Arg Tyr Tyr Arg Met Ala Ala Leu Val Tyr Tyr
260      265      270
Gly Phe Arg Met Arg Pro Asn Asp Ile Val Tyr Asp Cys Leu Pro Leu
275      280      285
Tyr His Ser Ala Gly Asn Ile Val Gly Ile Gly Gln Cys Leu Leu His
290      295      300
Gly Met Thr Val Val Ile Arg Lys Lys Phe Ser Ala Ser Arg Phe Trp
305      310      315      320
Asp Asp Cys Ile Lys Tyr Asn Cys Thr Ile Val Gln Tyr Ile Gly Glu
325      330      335
Leu Cys Arg Tyr Leu Leu Asn Gln Pro Pro Arg Glu Ala Glu Asn Gln
340      345      350
His Gln Val Arg Met Ala Leu Gly Asn Ala Ser Gly Ser Pro Ser Gly
355      360      365
Pro Thr Phe Pro Ala Ala Ser Thr Tyr Pro Arg Trp Leu Ser Ser Thr
370      375      380
Gly Pro Glu Cys Asn Cys Ser Leu Gly Asn Phe Asp Ser Gln Val Gly
385      390      395      400
Ala Cys Gly Phe Asn Ser Arg Ile Leu Ser Phe Val Tyr Pro Ile Arg
405      410      415
Leu Val Arg Val Asn Glu Asp Thr Met Glu Leu Ile Arg Gly Pro Asp
420      425      430
Gly Val Cys Ile Pro Cys Gln Pro Gly Glu Pro Gly Gln Leu Val Gly
435      440      445
Arg Ile Ile Gln Lys Asp Pro Leu Arg Arg Phe Asp Gly Tyr Leu Asn
450      455      460
Gln Gly Ala Asn Asn Lys Lys Ile Ala Lys Asp Val Phe Lys Lys Gly
465      470      475      480
Asp Gln Ala Tyr Leu Thr Gly Asp Val Leu Val Met Asp Glu Leu Gly
485      490      495
Tyr Leu Tyr Phe Arg Asp Arg Thr Gly Asp Thr Phe Arg Trp Lys Gly
500      505      510
Glu Asn Val Ser Thr Thr Glu Val Glu Gly Thr Leu Ser Arg Leu Leu
515      520      525
Asp Met Ala Asp Val Ala Val Tyr Gly Val Glu Val Pro Gly Thr Glu
530      535      540
Gly Arg Ala Gly Met Ala Ala Val Ala Ser Pro Thr Gly Asn Cys Asp

```

gatgctggat ccggagcccc aggttccgcc ccagagcggg cctggacaag gccagaccaa
 2160
 agcaagcagg gcctggcacc tccatcctga ggtgctgccc ctccatccaa aactgccaag
 2220
 tgactcattg ccttcccaac ccttccagag gctttctgtg aaagtctcat gtccaagttc
 2280
 cgtcttctgg gctgggcagg ccctcggggt cccaggctga gactgacggg ttttctcagg
 2340
 atgatgtctt gggtagagggt agggagagga caaggggtca ccgagccctt cccagagagc
 2400
 agggagctta taaatggaac cagagcagaa gtccccagac tcaggaagtc aacagagtgg
 2460
 gcagggacag tggtagcatc catctggtgg ccaaagagaa tcgtagcccc agagctgccc
 2520
 aagttcactg ggctccaccc ccacctccag gaggggagga gaggacctga catctgaagg
 2580
 tggccctga tgcccatct acagcaggag gtcaggacca cggccctggc ctctccccc
 2640
 tcacccatcc tcttcctgg gtggctgcct gattatccct caggcagggc ctctcagtc
 2700
 ttgtgggtct gtgtcacctc catctcagtc ttggcctggc tatgagggga ggaggaatgg
 2760
 gaggcggggc tcaggggcca ataaactctg ccttgagtcc tcctagcctg tgtgcaaacc
 2820
 acccaagccc accctgaccc cagaacccca cagccccact gtggccgctt gatccccac
 2880
 gccaaccccc tggccattg acccgctca tctgttcatt cacttatcta agctgagggg
 2940
 gtagcaggta agatgccga gccctgcct ccaatgtgct gggtcagccg gggcagtgcc
 3000
 catgtgaatc tggcaagggtg tttaacagtg tgggcttgaa agtccaaacc aaaaaaaaa
 3059

<210> 5040

<211> 616

<212> PRT

<213> Homo sapiens

<400> 5040

Met Leu Leu Gly Ala Ser Leu Val Gly Val Leu Leu Phe Ser Lys Leu
 1 5 10 15
 Val Leu Lys Leu Pro Trp Thr Gln Val Gly Phe Ser Leu Leu Phe Leu
 20 25 30
 Tyr Leu Gly Ser Gly Gly Trp Arg Phe Ile Arg Val Phe Ile Lys Thr
 35 40 45
 Ile Arg Arg Asp Ile Phe Gly Gly Leu Val Leu Leu Lys Val Lys Ala
 50 55 60
 Lys Val Arg Gln Cys Leu Gln Glu Arg Arg Thr Val Pro Ile Leu Phe
 65 70 75 80
 Ala Ser Thr Val Arg Arg His Pro Asp Lys Thr Ala Leu Ile Phe Glu
 85 90 95
 Gly Thr Asp Thr His Trp Thr Phe Arg Gln Leu Asp Glu Tyr Ser Ser
 100 105 110
 Ser Val Ala Asn Phe Leu Gln Ala Arg Gly Leu Ala Ser Gly Asp Val

agcagtgtag ccaacttcct gcaggcccg ggccctggcct cgggcatgt ggctgccatc
540
ttcatggaga accgcaatga gttcgtgggc ctatggctgg gcatggccaa gctcgggtgtg
600
gaggcagccc tcatcaacac caacctgagg cgggatgctc tgctccactg cctcaccacc
660
tcgcgcgcac gggcccttgt ctttggcagc gaaatggcct cagccatctg tgaggtccat
720
gccagcccg acccctcgct cagcctcttc tgctctggct cctgggagcc cggtgccgtg
780
cctccaagca cagaacacct ggaccctctg ctgaaagatg ctccaagca ccttcccagt
840
tgtcctgaca agggcttcac agataaactg ttctacatct acacatccgg caccacaggg
900
ctgccaagg ccgccatcgt ggtgcacagc aggtattacc gcatggctgc cctgggtgac
960
tatggattcc gcatggggcc caacgacatc gtctatgact gcctccccct ctaccactca
1020
gcaggaaaca tcgtgggaat cggccagtgc ctgctgcatg gcatgacggg ggtgattcgg
1080
aagaagttct cagcctcccg gttctgggac gattgtatca agtacaactg cacgattgtg
1140
cagtacattg gtgaactgtg ccgctacctc ctgaaccagc caccgcggga ggcagaaaa
1200
cagcaccagg ttcgcatggc actaggcaat gcctccggca gtccatctgg accaactttt
1260
ccagccgctt ccacataccc caggtggctg agttctacgg ggccagagtg caactgtagc
1320
ctgggcaact tcgacagcca ggtggggggc tgtgggttca atagccgcat cctgtccttc
1380
gtgtacccca tccggttggg acgtgtcaac gaggacacca tggagctgat cggggggccc
1440
gacggcgtct gcattccctg ccagccaggg gagccggggc agctgggtgg cgcacatc
1500
cagaaagacc ccctgcgcg cttcgatggc tacctcaacc agggcgccaa caacaagaag
1560
attgccaagg atgtcttcaa gaagggggac caggcctacc ttactggtga tgtgctggtg
1620
atggacgagc tgggctacct gtacttccga gaccgcactg gggacacgtt ccgctggaaa
1680
ggtgagaacg tgtccaccac cgaggtggaa ggcacactca gccgctgct ggacatggct
1740
gacgtggccg tgtatggtgt cgaggtgcca ggaaccgagg gccggggcgg aatggctgct
1800
gtggccagcc cactggcaa ctgtgacctg gagcgctttg ctgaggtctt ggagaaggaa
1860
cttccctgt atgcgcgccc catcttctct gcctcctgc ctgagctgca caaaacagga
1920
acctacaagt tccagaagac agagctacgg aaggaggcct ttgaccggc tattgtgaag
1980
accgctgtt ctatctagat gcagaagggc cgctacgtcc cgctggacca agaggcctac
2040
agccgcatcc aggagggcaa ggagaagctg tgattcccc catccctctg agggccggcg
2100

290 295 300
 Lys Arg Phe Phe Glu Ser Leu Glu Glu Ile Asp Ser Phe Met Ser Ser
 305 310 315 320
 Arg Gly Lys Pro Leu Pro Gln Leu Ser Ser Ile Asp Trp Ile Arg Asp
 325 330 335
 Leu Ala Phe Leu Val Asp Met Thr Met His Leu Asn Ala Leu Asn Ile
 340 345 350
 Ser Leu Gln Gly His Ser Gln Ile Val Thr Gln Met Tyr Asp Leu Ile
 355 360 365
 Arg Ala Phe Leu Ala Lys Leu Cys Leu Trp Glu Thr His Leu Thr Arg
 370 375 380
 Asn Asn Leu Ala His Phe Pro Thr Leu Lys Leu Ala Ser Arg Asn Glu
 385 390 395 400
 Ser Asp Gly Leu Asn Tyr Ile Pro Lys Ile Ala Glu Leu Lys Thr Glu
 405 410 415
 Phe Gln Lys Arg Leu Ser Asp Phe Lys Leu Tyr Glu Ser Glu Leu Thr
 420 425 430
 Leu Phe Ser Ser Pro Phe Ser Thr Lys Ile Asp Ser Val His Glu Glu
 435 440 445
 Leu Gln Met Glu Val Ile Asp Leu Gln Cys Asn Thr Val Leu Lys Thr
 450 455 460
 Lys Tyr Asp Lys Val Gly Ile Pro Glu Phe Tyr Lys Tyr Leu Trp Gly
 465 470 475 480
 Ser Tyr Pro Lys Tyr Lys His His Cys Ala Lys Ile Leu Ser Met Phe
 485 490 495
 Gly Ser Thr Tyr Ile Cys Glu Gln Leu Phe Ser Ile Met Lys Leu Ser
 500 505 510
 Lys Thr Lys Tyr Cys Ser Gln Leu Lys Asp Ser Gln Trp Asp Ser Val
 515 520 525
 Leu His Ile Ala Thr
 530

<210> 5039

<211> 3059

<212> DNA

<213> Homo sapiens

<400> 5039

gggccatgca gggcgcagac cggctaaacc ctgctgagac ccggctccgt gcgtccaggg
 60
 gcggctaata cctcacgct gtctacgctg ctgcaaccgg gccgcatctg gacggggcgc
 120
 cgcgcgcgga gcgacgccgg gccagcaatg ctgcttgagg cctctctggt gggggtgctg
 180
 ctgttctcca agctggtgct gaaactgcc tggaccagg tgggattctc cctgttgctc
 240
 ctctacttgg gatctggcgg ctggcgcttc atccgggtct tcatcaagac catcaggcgc
 300
 gatattcttg gcggcctggt cctcctgaag gtgaaggcaa aggtgcgaca gtgcctgcag
 360
 gaggcgcgga cagtgcccat tttgtttgcc tctaccgttc ggcgccaccc cgacaagacg
 420
 gccctgatct tcgagggcac agataccac tggaccttcc gccagctgga tgagtactca
 480

aaggattccc agtgggattc tgtactccac atcgcaacgt gatggagaga aaactcctgg
 1920
 cagggcccta tgggtgggaaa ggctgggagtc ttctagtccc aagggattgg gagatgacaa
 1980
 aatgaattttt tttttctttt ttgagatgga gtcttgctct gtcgcccagg ttggagtgca
 2040
 gtggcgtgat ctcggcttac tgcaacttcc agctcctggg ttcgaacgat tctcctgcct
 2100
 ca
 2102

<210> 5038

<211> 533

<212> PRT

<213> Homo sapiens

<400> 5038

Gly	Lys	Arg	Lys	Ile	Asp	Gln	Glu	Gly	Arg	Val	Phe	Gln	Glu	Lys	Trp
1			5					10						15	
Glu	Arg	Ala	Tyr	Phe	Phe	Val	Glu	Val	Gln	Asn	Ile	Pro	Thr	Cys	Leu
		20					25						30		
Ile	Cys	Lys	Gln	Ser	Met	Ser	Val	Ser	Lys	Glu	Tyr	Asn	Leu	Arg	Arg
	35					40						45			
His	Tyr	Gln	Thr	Asn	His	Ser	Lys	His	Tyr	Asp	Gln	Tyr	Thr	Glu	Arg
	50					55				60					
Met	Arg	Asp	Glu	Lys	Leu	His	Glu	Leu	Lys	Lys	Gly	Leu	Arg	Lys	Tyr
65					70					75				80	
Leu	Leu	Gly	Ser	Ser	Asp	Thr	Glu	Cys	Pro	Glu	Gln	Lys	Gln	Val	Phe
			85						90					95	
Ala	Asn	Pro	Ser	Pro	Thr	Gln	Lys	Ser	Pro	Val	Gln	Pro	Val	Glu	Asp
		100						105					110		
Leu	Ala	Gly	Asn	Leu	Trp	Glu	Lys	Leu	Arg	Glu	Lys	Ile	Arg	Ser	Phe
	115						120					125			
Val	Ala	Tyr	Ser	Ile	Ala	Ile	Asp	Glu	Ile	Thr	Asp	Ile	Asn	Asn	Thr
	130					135					140				
Thr	Gln	Leu	Ala	Ile	Phe	Ile	Arg	Gly	Val	Asp	Glu	Asn	Phe	Asp	Val
145					150					155				160	
Ser	Glu	Glu	Leu	Leu	Asp	Thr	Val	Pro	Met	Thr	Gly	Thr	Lys	Ser	Gly
			165					170					175		
Asn	Glu	Ile	Phe	Ser	Arg	Val	Glu	Lys	Ser	Leu	Lys	Lys	Phe	Cys	Ile
	180							185					190		
Asp	Trp	Ser	Lys	Leu	Val	Ser	Val	Ala	Ser	Thr	Gly	Thr	Pro	Ala	Met
	195						200					205			
Val	Asp	Ala	Asn	Asn	Gly	Leu	Val	Thr	Lys	Leu	Lys	Ser	Arg	Val	Ala
	210					215					220				
Thr	Phe	Cys	Lys	Gly	Ala	Glu	Leu	Lys	Ser	Ile	Cys	Cys	Ile	Ile	His
225					230					235				240	
Pro	Glu	Ser	Leu	Cys	Ala	Gln	Lys	Leu	Lys	Met	Asp	His	Val	Met	Asp
			245					250					255		
Val	Val	Val	Lys	Ser	Val	Asn	Trp	Ile	Cys	Ser	Arg	Gly	Leu	Asn	His
	260						265						270		
Ser	Glu	Phe	Thr	Thr	Leu	Leu	Tyr	Glu	Leu	Asp	Ser	Gln	Tyr	Gly	Ser
	275					280						285			
Leu	Leu	Tyr	Tyr	Thr	Glu	Ile	Lys	Trp	Leu	Ser	Arg	Gly	Leu	Val	Leu

ctcatagtag tgataagaga aaagtgaat atctttgtct cctgtctct gtcaaaagt
300
ggaaaacgca agatagacca ggagggccgt gtgtttcaag aaaagtggga gagagcgtat
360
ttcttcgtgg aagtacagaa tattccaaca tgtctcatat gcaaacaag catgtctgtg
420
tccaaagaat ataacctag acgccactat caaaccaatc acagcaagca ttatgaccag
480
tatacggaag gaatgcgtga cgagaagctt cacgagctga aaaaagggt caggaagtat
540
ctcttaggct catcagacac cgagtgtccc gagcaaaaac aagtgtttgc aaacccaagt
600
ccaaccaga aatccccctg gcagcctgta gaggacctag ctgggaactt atgggagaag
660
ttacgtgaaa aaatcaggtc ttttgtggca tattctatcg caatcgatga gatcacggat
720
ataaataata ccaccagtt ggccatattc atccgtggtg tcgatgagaa ttctgatgtg
780
tccgaagaac ttctggacac ggtgcccatg acgggtacaa aatctggcaa cgagatcttt
840
tcgctgttg agaagagcct gaaaaagtgc tgtatcgact ggtcgaaatt agtaagcgtg
900
gcctccactg gcaccccagc gatggtggat gccataacg ggcttgcac aaaactgaag
960
tccaggggtg cgacgttctg caaggggtgc gaactgaagt ccatctgttg tataattcat
1020
ccggaatcac tctgtgctca gaagttgaag atggaccacg tcatggacgt ggtagtgaag
1080
tccgtgaact ggatatgctc ccggggactg aaccacagcg agttcacaac cttgctctat
1140
gagctggaca gccagtatgg tagcctcctg tactacacgg agattaagt gctcagtcg
1200
gggctcgtgc taaagagatt ttctgaatcc ttggaagaaa tcgactcctt catgtcatcc
1260
agagggaaac cctgcctca actgagctcc atagattgga tccgagacct ggcttcttg
1320
gttgacatga cgatgcattt gaacgctttg aacatctctc tccaaggaca ctcccaaact
1380
gtcacgcaga tgtatgacct gatccgggag ttcctagcaa aactgtgcct ctgggagact
1440
catttgacga ggaataatct ggccacttt cccacctga aattggcttc cagaaatgaa
1500
agcgatggcc tgaactacat tccaaaatc gcggaactca agaccgaatt ccagaaaagg
1560
ctgtctgatt tcaaactcta cgaaagcgaa ctgactctgt tcagctcccc gttctccacg
1620
aagatcgaca gtgtgcacga ggagctccag atggagggtta tcgacctgca atgcaacacg
1680
gtcctgaaga cgaaatacga caaggtggga ataccagaat tctacaagta cctctggggt
1740
agctaccgca aatacaagca ccattgcgca aagattcttt ccatgttcgg gagcacctac
1800
atctgcgaac agctgttctc cattatgaaa ctgagcaaaa caaaatactg ctcccagtta
1860

65					70					75				80	
Phe	Leu	Tyr	Glu	Lys	Leu	Asp	Arg	Lys	Val	Pro	Ser	Arg	Val	Thr	Asn
				85					90					95	
Gly	Glu	Leu	Leu	Ala	Gln	Tyr	Met	Ala	Asp	Ala	Ala	Ser	Glu	Leu	Gly
			100					105					110		
Pro	Thr	Thr	Pro	Tyr	Gly	Lys	Thr	Leu	Ile	Lys	Val	Ala	Glu	Ala	Glu
			115				120					125			
Lys	Gln	Leu	Gly	Ala	Ala	Glu	Arg	Asp	Phe	Ile	His	Thr	Ala	Ser	Ile
	130					135					140				
Ser	Phe	Leu	Thr	Pro	Leu	Arg	Asn	Phe	Leu	Glu	Gly	Asp	Trp	Lys	Thr
145					150					155					160
Ile	Ser	Lys	Glu	Ser	Arg	Leu	Leu	Gln	Asn	Arg	Arg	Leu	Asp	Leu	Asp
				165					170					175	
Ala	Cys	Lys	Ala	Arg	Leu	Lys	Lys	Ala	Lys	Ala	Ala	Glu	Ala	Lys	Ala
			180					185					190		
Thr	Leu	Trp	Asn	Asp	Glu	Val	Asp	Lys	Ala	Glu	Gln	Glu	Leu	Arg	Val
			195				200					205			
Ala	Gln	Thr	Glu	Phe	Asp	Arg	Gln	Ala	Glu	Val	Thr	Arg	Leu	Leu	Leu
	210					215					220				
Glu	Gly	Ile	Ser	Ser	Thr	His	Val	Asn	His	Leu	Arg	Cys	Leu	His	Glu
225					230					235					240
Phe	Val	Lys	Ser	Gln	Thr	Thr	Tyr	Tyr	Ala	Gln	Cys	Tyr	Arg	His	Met
				245					250					255	
Leu	Asp	Leu	Gln	Lys	Gln	Leu	Gly	Ser	Ser	Gln	Gly	Ala	Ile	Ser	Arg
		260					265						270		
His	Leu	Arg	Gly	His	His	Arg	Ala	Arg	Leu	Pro	Pro	Leu	Ser	Ser	Thr
		275					280					285			
Ser	Pro	Thr	Thr	Ala	Ala	Ala	Thr	Met	Pro	Val	Val	Pro	Ser	Val	Ala
	290					295					300				
Ser	Leu	Ala	Pro	Pro	Gly	Glu	Ala	Ser	Leu	Cys	Leu	Glu	Glu	Val	Ala
305					310					315					320
Pro	Pro	Ala	Ser	Gly	Thr	Arg	Lys	Ala	Arg	Val	Leu	Tyr	Asp	Tyr	Glu
				325					330					335	
Ala	Ala	Asp	Ser	Ser	Glu	Leu	Ala	Leu	Leu	Ala	Asp	Glu	Leu	Ile	Thr
			340					345					350		
Val	Tyr	Ser	Leu	Pro	Gly	Met	Asp	Pro	Asp	Trp	Leu	Ile	Gly	Glu	Arg
		355					360					365			
Gly	Asn	Lys	Lys	Gly	Lys	Val	Pro	Val	Thr	Tyr	Leu	Glu	Leu	Leu	Ser
	370					375					380				

<210> 5037

<211> 2102

<212> DNA

<213> Homo sapiens

<400> 5037

gcactgcagc ctgggcgaca gagcaaaact ccgtctcaac aacaacgaca acaaaaattc

60

agtcttcagg tttctttag aaaacttgaa gatctggcca cagctggcat cctggcagcg

120

gtttgctgga gttgagggtc agccgtccct ctgcagggtg ggtcaccctc ctgttaacca

180

cgccctgccc cgccccgctt cctccctctc gtgcgtcacc aagcatttgc tgttggtttc

240

ccctctgtgg ccagcctggc ccctccgggg gaggcctcgc tctgcctgga agaggtggcc
 960
 ccccttgcca gtgggacccg caaagctcgg gtgctctatg actacgaggg agccgacagc
 1020
 agtgagctgg ccctgctggc tgatgagctc atcactgtct acagcctgcc tggcatggac
 1080
 cctgactggc tcattggcga gagaggcaac aagaagggca aggtccctgt cacctacttg
 1140
 gaactgctca gctaggcagg tgcccccatc cccccgcac tctggcctag gcaggagagg
 1200
 atgggagcag ccctgccact taactgtttt gttggtgaca cagttgttca gagtggggag
 1260
 aattcacccc attctgtccc tgccccctagt cacctagctg tgagggtgcc tgaggctgaa
 1320
 tggctccacc cctccccag ccctgcttct gacctgtggc tctggagccc ctgcccctgc
 1380
 ctgcatcccc gagcaccca ccctccaggc tccactaagg agggaggggc tgtctgcagc
 1440
 agctgcactc agcacctagg ccagggtggg gccgcgcag atgggctcag gaagccccag
 1500
 gtgcactcag cgagagccct gcctttcagt tgccaaaagc tgcacaggg gaatgcggca
 1560
 aggcacacag ggctctggca gcccctgggg actgggcgct gcccctggga ggggagagcc
 1620
 tggccagggc tgggtgtggg cccggagcag catcttccgg tgctatcctc ccctcccacc
 1680
 cctcacagct caagccaagt ccagcggccg cagtcttcac ctctccacac tcacttttta
 1740
 tctggtgttt ttacttctgc ctgcgtttgc tctctagcca ataaaccgtc cttgtgtgcg
 1800
 agcgcaaagc tcgggtgctc tatgactacg aggcagccga cagcagttag ctggccctgc
 1860
 tggctgatga gctcatcact gtctacagcc tgccctggcat ggaccctgac tggctcattg
 1920
 gcgagagagg caacaagaag ggcaaggtcc ctgtcaccta cttggaactg ctgagctagg
 1980
 caggtgcccc catccccccc gc
 2002

<210> 5036

<211> 384

<212> PRT

<213> Homo sapiens

<400> 5036

Arg Pro Cys Gly His Ala Met Asp Phe Asn Met Lys Lys Leu Ala Ser
 1 5 10 15
 Asp Ala Gly Ile Phe Phe Thr Arg Ala Val Gln Phe Thr Glu Glu Lys
 20 25 30
 Phe Gly Gln Ala Glu Lys Thr Glu Leu Asp Ala His Phe Glu Asn Leu
 35 40 45
 Leu Ala Arg Ala Asp Ser Thr Lys Asn Trp Thr Glu Lys Ile Leu Arg
 50 55 60
 Gln Thr Glu Val Leu Leu Gln Pro Asn Pro Ser Ala Arg Val Glu Glu

420 425 430
 Leu Arg Tyr Gly Ser Arg Asp Asp Leu Val Ala Gly Pro Gly Phe Gly
 435 440 445
 Gly Ala Arg Asn Pro Ala Leu Gln Thr Ser Leu Ser Ser Leu Ser Ser
 450 455 460
 Ser Val Ser Arg Ala Pro Arg Thr Ser Ser Ser Ser Leu Gln Ala Asp
 465 470 475 480
 Gln Ala Ser Ser Asn Ala Pro Gly Ala Pro Ala Gln Gln Trp Leu Thr
 485 490 495
 Gln Val Thr Cys Thr Pro Gly Pro Ala Leu Pro Ala Arg His Ser Pro
 500 505 510
 Leu Thr Ile Leu Arg Gly Pro Gln Ser Cys Arg Leu His Pro His Gly
 515 520 525
 Pro Pro Arg Ala Thr Ala Leu Ala Asp Arg Ala Glu Gly Pro Pro Ser
 530 535 540
 Ala Glu Asp Ser Pro Lys
 545 550

<210> 5035

<211> 2002

<212> DNA

<213> Homo sapiens

<400> 5035

cggccgtgcg ggcacgccat ggacttcaac atgaagaagc tggcgtcgga cgcgggcatc
 60
 ttcttcaccc gggcggtgca gttcacggag gagaaatttg gccaggctga gaagactgag
 120
 cttgatgccc actttgaaaa ctttctggcc cgggcagaca gcaccaagaa ctggacagag
 180
 aagatcttga ggcagacaga ggtgctgctg cagcccaacc ccagtgcccg agtggaggag
 240
 ttctgtatg agaagctgga caggaaggtc ccctcaaggg tcaccaacgg ggagctgctg
 300
 gctcagtaca tggcagacgc ggccagttag ctggggccga ccaccccta tgggaagaca
 360
 ctgatcaagg tggcagaagc tgaaaagcaa ctgggagccg cggagaggga ttttatccac
 420
 acggcctcca tcagcttctt cacacccttg cgcaacttcc tggaggggga ctggaagacc
 480
 atctcgaagg agagtcggct cctccaaaac cggcgtcttg acttggaatgc ctgcaaagcg
 540
 aggctgaaga aggccaaggc tgcagaagcc aaagccacgc tctggaatga tgaagtggac
 600
 aaggccgagc aggagctccg cgtggcccag acagagtttg accggcaagc agaagtgacc
 660
 cgtctcttgc tggagggaaat cagtagcact cagtgtaacc acctgcgctg cctccacgag
 720
 ttctcaagt ctacagacaac ctactacgca cagtgtacc gccacatgct ggacttgag
 780
 aagcagctgg gcagctccca gggtgccata tcccggcacc ttcgtgggca ccacagagcc
 840
 cgccctccac cctgagcag cacctcacc accactgctg cggccactat gcctgtggtg
 900

<400> 5034

Xaa Asp Glu Asp Lys Glu Asp Asp Phe Arg Ala Pro Leu Tyr Lys Asn
 1 5 10 15
 Val Asp Val Arg Gly Ile Gln Val Arg Met Lys Trp Cys Ala Thr Cys
 20 25 30
 His Phe Tyr Arg Pro Pro Arg Cys Ser His Cys Ser Val Cys Asp Asn
 35 40 45
 Cys Val Glu Val Thr Gly Lys Phe Arg Gly Gly Val Asn Pro Phe Thr
 50 55 60
 Arg Gly Cys Cys Gly Asn Val Glu His Val Leu Cys Ser Pro Leu Ala
 65 70 75 80
 Pro Arg Tyr Val Val Glu Pro Pro Arg Leu Pro Leu Ala Val Ser Leu
 85 90 95
 Lys Pro Pro Phe Leu Arg Pro Glu Leu Leu Asp Arg Ala Ala Pro Leu
 100 105 110
 Lys Val Lys Leu Ser Asp Asn Gly Leu Lys Ala Gly Leu Gly Arg Ser
 115 120 125
 Lys Ser Lys Gly Ser Leu Asp Arg Leu Asp Glu Lys Pro Leu Asp Leu
 130 135 140
 Gly Pro Pro Leu Pro Pro Lys Ile Glu Ala Gly Thr Phe Ser Ser Asp
 145 150 155 160
 Leu Gln Thr Pro Arg Pro Gly Ser Ala Glu Ser Ala Leu Ser Val Gln
 165 170 175
 Arg Thr Ser Pro Pro Thr Pro Ala Met Tyr Lys Phe Arg Pro Ala Phe
 180 185 190
 Pro Thr Gly Pro Lys Val Pro Phe Cys Gly Pro Gly Glu Gln Val Pro
 195 200 205
 Gly Pro Asp Ser Leu Thr Leu Gly Asp Asp Asn Ile Arg Ser Leu Asp
 210 215 220
 Phe Val Ser Glu Pro Ser Leu Asp Leu Pro Asp Tyr Gly Pro Gly Gly
 225 230 235 240
 Leu His Ala Ala Tyr Pro Pro Ser Pro Pro Leu Ser Ala Ser Asp Ala
 245 250 255
 Phe Ser Gly Ala Leu Arg Ser Leu Ser Leu Lys Ala Ser Ser Arg Arg
 260 265 270
 Gly Gly Asp His Val Ala Leu Gln Pro Leu Arg Ser Glu Gly Gly Pro
 275 280 285
 Pro Thr Pro His Arg Ser Ile Phe Ala Pro His Ala Leu Pro Asn Arg
 290 295 300
 Asn Gly Ser Leu Ser Tyr Asp Ser Leu Leu Asn Pro Gly Ser Pro Gly
 305 310 315 320
 Gly His Ala Cys Pro Ala His Pro Ala Val Gly Val Ala Gly Tyr His
 325 330 335
 Ser Pro Tyr Leu His Pro Gly Ala Thr Gly Asp Pro Pro Arg Pro Leu
 340 345 350
 Pro Arg Ser Phe Ser Pro Val Leu Gly Pro Arg Pro Arg Glu Pro Ser
 355 360 365
 Pro Val Arg Tyr Asp Asn Leu Ser Arg Thr Ile Met Ala Ser Ile Gln
 370 375 380
 Glu Arg Lys Asp Arg Glu Glu Arg Glu Arg Leu Leu Arg Ser Gln Ala
 385 390 395 400
 Asp Ser Leu Phe Gly Asp Ser Gly Val Tyr Asp Ala Pro Ser Ser Tyr
 405 410 415
 Ser Leu Gln Gln Ala Ser Val Leu Ser Glu Gly Pro Arg Gly Pro Ala

acgccagggc ctgccctccc cgcccggcac tccccactca ccatectacg cgggccccaa
1560
agctgtcgcc ttcattccaca cggacctccc agagccaccg ccctcgctga ccgtgcagag
1620
ggaccaccct cagctgaaga ctcccccaag taagcttaat gggcagtcct cgggcctggc
1680
ccggctggga cctgccaccg gccccccagg gccctctgcc agccctacac ggcacacgct
1740
ggttaagaag gtgtccggcg tgggtgggac cacctacgag atctcgggtg gaggactgac
1800
tgccacacat ccgccatggt gccacgggga ccaggacccc gcagcgcacc cccctcccc
1860
accaacttct ctgccccagg gaccggaggc caccacagcc tgggtgtggac ccatcggcg
1920
gagagagtgc cagcctcca cagcttgccc caagcgtctt gcctgccgtt ccaactcatc
1980
gcccattggg aagtccgctc actgggacaa gggccactgg gctgggtctgt gtctgggcct
2040
gtcccatggc tggggcagtg agggggccca gtcagcctct ttggggcacc ctctctcagc
2100
caggcttggc ccaactgccat caccagcac cccagatcac cgccaggcca gcccccaatg
2160
gtccccttac ggacaggtcc cagagatgga cagaggcacc caggggcccc accgtccttc
2220
tgacacagcc tgtgggctcc cggaccgagt gtcccccgcc aggtactctc taactaacgc
2280
gttgcccttc acggaccccg ctggaagctt gtagcttggc aaggctgatg cttctgccct
2340
ggcctgctct ggggtggtgt ggataggtgg acagacggcc agccagccag ctgtggccgg
2400
gggcccggct ccatgtgtcc cgtgtctgtg tgctgtgtg ccgcgcgtg tctgatgtgt
2460
cagtgtccg gccgccgtg tccctttcat caaagcctta acctttgctt tatgtctctg
2520
tgaggaggca cgggggggca ggggggagca ggcacggggg tgatgtgtcc acagggggct
2580
ggtgacacc agagccccct cccagccct caggccctcc ctgccaaact ggagaacccc
2640
acccaaggc atgccacgtc cgcagccccg gcctggctgc ggtgctcgc cgtgggaaa
2700
gcacactggg gaggggtcag tgcttccctt ggtgtcaggg acctgagagt aagcacatga
2760
cagcgtctgc ttgcgttgtg tctgttttat gtttttatat ctacatctat atatctataa
2820
ttttattaaa aaaaagaaaa agaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2880
aaaaaaaa
2888

<210> 5034

<211> 550

<212> PRT

<213> Homo sapiens

<212> DNA

<213> Homo sapiens

<400> 5033

nnggatgagg acaaggagga cgacttccgg gctccgctgt acaagaacgt ggatgtgcga
60
ggatccagg tccgcatgaa gtggtgtgcc acgtgccact tctaccgccc gccgcgctgc
120
tcccactgca gcgtctgtga caactgtgta gaggtgactg ggaagtccg cgggggtgtg
180
aaccctttca cccgaggctg ctgtgggaat gtggagcacg tgctgtgtag cccctggcg
240
ccccggtacg tgggtggagcc accccggtg cgcctcggg tgagtttgaa gccgccttc
300
cttaggcctg aactcctgga ccgagctgca ccgctcaagg tcaagcttag tgacaacggg
360
ctgaaggctg gcctgggccg tagcaagtc aagggcagcc tggaccggct ggatgagaag
420
ccactggact tggggccacc actgcccccc aagatagagg ctggcacgtt cagcagtgc
480
ctgcagaccc cgcgcccagg cagtgcctg agtgccctgt cggtcagag gaccagcccc
540
ccgacacctg ccatgtacaa gtttaggccc gctttcccca cgggtcccaa ggtgcccttc
600
tgtggaccag gcgagcaggt tccaggccct gattccctga ccctggggga cgacaacatc
660
cgtagcctgg actttgtgtc cgagccgagc ctggacctcc ctgactatgg gccagggggc
720
ctgcatgcag cctaccgcc atccccaccg ctacgcct ctgatgcctt ctcgggcgt
780
ttgcgctccc tgagcctcaa ggctcgagc cggcggggcg gggatcatgt ggccctgcag
840
cccctgcgt ctgagggggg gccccccacg cccaccgta gcatttttgc ccccatgca
900
ctgcccacc gcaacggcag cctgtcctat gacagcctgc tcaatcctgg ctgcctggt
960
ggccacgcct gccctgcca ccagcagtt ggctggccg gataccactc accctacctg
1020
catcctggg caacgggga cccgccacg cccctacccc gcagcttcag cccgtgctg
1080
ggccccgcc cccgggagcc ctgcctgtg cgctacgaca acctgtccag gaccatcatg
1140
gcatccatc aggagcgcaa ggacaggag gagcgtgagc gcctgctgc ctcagggcc
1200
gactactct tcggcgactc aggcgtctat gacgtccca gctcctacag cctgcagcag
1260
gccagtgtg tgtccgagg ccccgagggt cccgcgtgc gctatggctc cagagacgac
1320
cttgtggctg gggccggtt cgggtgggcc cgcaaccctg ccctgcagac gtcactgtcc
1380
tcgctgtcca gctccgtgag ccgtgcaccg cggacgtcgt cctcctccct gcaggctgat
1440
caggccagca gcaacgcccc cggggccccg gccagcagt ggctcacaca ggtcacctgc
1500

<210> 5031
 <211> 505
 <212> DNA
 <213> Homo sapiens

<400> 5031
 tggcgcgcct tgacgagtga gccggggagc catggacaac tgtttggcgg ccgcagcgct
 60
 gaatggggtg gaccgacgtt ccctgcagcg ttcagcaagg ctggctctag aagtgtgga
 120
 gagggccaaag aggagggcgg tggactggca tgccttgag cgtcccaaag gctgcatggg
 180
 ggtccttgcc cgggaggcgc ccacactaga gaaacagccg gcagccggcc cgcagcgct
 240
 tctcccgga gagagagaag agagaccccc aacccttagt gcttccttca gaacaatggc
 300
 tgaattcatg gactatactt caagtcagtg tgggaaatat tattcatctg tgccagagga
 360
 aggaggggca acccatgtct atcgttatca cagaggcgag tcgaagctgc acatgtgctt
 420
 ggacataggg aatggtcaga gaaaagacag aaaaaagaca tcccttggtc ctggaggcag
 480
 ctatcaaata tcagagcatg ctcca
 505

<210> 5032
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 5032
 Met Asp Asn Cys Leu Ala Ala Ala Leu Asn Gly Val Asp Arg Arg
 1 5 10 15
 Ser Leu Gln Arg Ser Ala Arg Leu Ala Leu Glu Val Leu Glu Arg Ala
 20 25 30
 Lys Arg Arg Ala Val Asp Trp His Ala Leu Glu Arg Pro Lys Gly Cys
 35 40 45
 Met Gly Val Leu Ala Arg Glu Ala Pro His Leu Glu Lys Gln Pro Ala
 50 55 60
 Ala Gly Pro Gln Arg Val Leu Pro Gly Glu Arg Glu Glu Arg Pro Pro
 65 70 75 80
 Thr Leu Ser Ala Ser Phe Arg Thr Met Ala Glu Phe Met Asp Tyr Thr
 85 90 95
 Ser Ser Gln Cys Gly Lys Tyr Tyr Ser Ser Val Pro Glu Glu Gly Gly
 100 105 110
 Ala Thr His Val Tyr Arg Tyr His Arg Gly Glu Ser Lys Leu His Met
 115 120 125
 Cys Leu Asp Ile Gly Asn Gly Gln Arg Lys Asp Arg Lys Lys Thr Ser
 130 135 140
 Leu Gly Pro Gly Gly Ser Tyr Gln Ile Ser Glu His Ala Pro
 145 150 155

<210> 5033
 <211> 2888

gtcaatacccc gtgaaaataa actgaccctc atgatacaca gctccatttt tgttctgcta
 840
 cttctcacc ctcattttcac ttcctatggg gctattgccc aggcgtgtact gaggatgcag
 900
 tcaaccactg ggcttcagaa agtatttggg acatgtggag ctcacatata ggttgtatct
 960
 ctcttttttca ttccggccat gtgcatgtat ctccagccac catcagggaa ttctcaagat
 1020
 caaggcaagt tcattgctct cttttatact gttgttacac ctagtcttaa ccctctaate
 1080
 tacaccctca gaaacaaaga tgtaagaggg gtagtgaaga gactaagggg gtgggagtga
 1140
 gcctgtgttt gtgtgatatt aacaatataa tggagtcttt cctcacaatg attcatccat
 1200
 ctgttcattt atcaaccatt cttttattca ctactctgt tagcacttgc tgagcatgta
 1260
 ctctaacaaa gtcgtggaga tcttggtaac aggtaggaat aaaacacatt cagcttaaat
 1320
 accattcact tttggagaaa acagctgtgt aaaatcaaga taaaacatct atagtgtatg
 1380
 ttttccatgg cacaaccta atgaatacaa gaaagacttt tcttgattaa aaataaggca
 1440

<210> 5030

<211> 188

<212> PRT

<213> Homo sapiens

<400> 5030

Met	Asn	Asp	Asp	Gly	Lys	Val	Asn	Ala	Ser	Ser	Glu	Gly	Tyr	Phe	Ile
1				5					10					15	
Leu	Val	Gly	Phe	Ser	Asn	Trp	Pro	Tyr	Leu	Glu	Val	Val	Leu	Phe	Val
		20						25					30		
Val	Ile	Leu	Ile	Phe	Cys	Leu	Met	Thr	Leu	Ile	Gly	Asn	Leu	Phe	Ile
		35					40					45			
Ile	Ile	Leu	Thr	Tyr	Leu	Asp	Ser	His	Leu	His	Thr	Pro	Leu	Tyr	Phe
		50					55				60				
Phe	Leu	Ser	Asn	Leu	Ser	Phe	Leu	Asp	Leu	Cys	Tyr	Thr	Thr	Ser	Ser
65						70				75				80	
Ile	Pro	Gln	Leu	Leu	Val	Ser	Leu	Trp	Gly	Val	Glu	Lys	Thr	Ile	Ser
			85						90					95	
Tyr	Ala	Gly	Cys	Met	Val	Gln	Leu	Tyr	Phe	Phe	Leu	Thr	Leu	Gly	Thr
			100					105					110		
Thr	Glu	Cys	Val	Leu	Leu	Val	Val	Met	Ser	Tyr	Asp	Arg	Tyr	Ala	Ala
		115					120					125			
Val	Cys	Arg	Pro	Leu	His	Tyr	Thr	Val	Leu	Met	His	Ser	Arg	Phe	Cys
		130					135					140			
His	Leu	Leu	Ala	Val	Ala	Ser	Trp	Val	Ser	Gly	Phe	Thr	Asn	Pro	Ala
145						150				155				160	
Leu	His	Ser	Ser	Phe	Thr	Phe	Trp	Val	Pro	Leu	Cys	Gly	His	Arg	Gln
			165					170						175	
Ile	Asp	His	Phe	Phe	Cys	Glu	Val	Pro	Ala	Leu	Leu				
			180					185							

gagtgcgaag ccctcactc agcccatccc tgggctctgc tccggggccc caagaccag
 300
 gaggaggagc gttctgcctg cccctcccca cctccctgc aatacagcct ttgtgcggn
 359

<210> 5028
 <211> 68
 <212> PRT
 <213> Homo sapiens

<400> 5028
 Xaa Gly Gly Gly Ala Gly Ala Leu Gly Ala Arg His Gly Gly Lys Gly
 1 5 10 15
 Gln Gly Gln Gln Gln Arg Ala Gln Arg Gly His Gly Gly Ser Ala Gly
 20 25 30
 Lys Thr His Lys Phe Ser Ala Gly Thr Tyr Pro Arg Leu Glu Glu Tyr
 35 40 45
 Arg Arg Gly Ile Leu Gly Asp Trp Ser Asn Ala Ile Ser Ala Leu Tyr
 50 55 60
 Cys Arg Cys Ser
 65

<210> 5029
 <211> 1440
 <212> DNA
 <213> Homo sapiens

<400> 5029
 nnacttttta tatcagtacg agctttataa ttcttctttt gttaagttca ttactactaa
 60
 tgggttaaatt gtctacaat taaatgatgg caagcccttc aaactggcctt ttatttttta
 120
 ttcatgtgtg ctgatatttt tggatcattt gtttactcgt tttttgagtt tacctgattt
 180
 tttttttctc tcaggtaata ggaaatgaat gatgatggaa aagtcaatgc tagctctgag
 240
 gggactttta ttttagttgg attttctaata tggccttata tgggaagtagt tctctttgtg
 300
 gttattttga tcttctgctt gatgacactg ataggaaacc tgttcatcat catcctgacg
 360
 tacctggact cccatctcca tactcccttg tatttcttcc ttcaaactct ctcatttctg
 420
 gatctctgct acaccaccag ctctatccct cagttgctgg tcagtctctg ggggtgtggaa
 480
 aagaccattt cttatgctgg ttgcatgggt caactttact tttttctcac actgggaacc
 540
 acagagtgtg tctactggt ggtgatgtcc tatgaccgtt atgcagctgt gtgtagacct
 600
 ttgcattaca ctgtcctcat gcactctcgt ttctgccact tgttggtgtt ggcttcttgg
 660
 gtaagtgggt ttacaaaccc agcacttcat tctccttca cttctctgggt acctctgtgt
 720
 ggacaccgcc aaatagatca ctttttctgt gaagttccgg cacttttatg attatcattt
 780

gagggaaaacg aagctcagga aaaggaaaact cctctgatca tgaaggggtgt tggaatgaag
 2280
 aaagctggac atttagtcag agtgggacca gtgggagcaa gaagttcaag aagacaaagc
 2340
 caaaagaaga ctgtctcctt ggctccgcaa agctggatga agaatttgaa aaaaaattca
 2400
 acagcctccc tcaatatagt cctgtttacat ttgaccggaa atgtgtacct gtcccaagaa
 2460
 aaaagaagaa gactggaaat gtgtcctcag aaccgactaa aaccagcaaa ggtcctttcc
 2520
 agtctcagaa aaagaactta ttccacaaaa ttgtcagcaa atataagcac aaaaaggaga
 2580
 agcccaatgt tccgga
 2596

<210> 5026

<211> 136

<212> PRT

<213> Homo sapiens

<400> 5026

Met	Asp	Glu	Ser	Pro	Glu	Gln	Arg	Ala	Arg	Arg	Pro	Met	Asn	Ala	Phe
1				5					10					15	
Leu	Leu	Phe	Cys	Lys	Arg	His	Arg	Ser	Leu	Val	Arg	Gln	Glu	His	Pro
			20					25					30		
Arg	Leu	Asp	Asn	Arg	Gly	Ala	Thr	Lys	Ile	Leu	Ala	Asp	Trp	Trp	Ala
			35				40					45			
Val	Leu	Asp	Pro	Lys	Glu	Lys	Gln	Lys	Tyr	Thr	Asp	Met	Ala	Lys	Glu
			50			55					60				
Tyr	Lys	Asp	Ala	Phe	Met	Lys	Ala	Asn	Pro	Gly	Tyr	Lys	Trp	Cys	Pro
65				70				75					80		
Thr	Thr	Asn	Lys	Pro	Val	Lys	Ser	Pro	His	Pro	Leu	Ser	Ile	His	Glu
			85					90					95		
Arg	Asn	Phe	Gly	Pro	Ser	His	Leu	Thr	Leu	Gln	Glu	Thr	Cys	Gln	Ala
			100				105						110		
Pro	Arg	Lys	Gln	Arg	Leu	Lys	Lys	Cys	Leu	Ser	Leu	Thr	Leu	Glu	Trp
			115			120						125			
Leu	Ile	Leu	Leu	Lys	Trp	Glu	Ala								
			130			135									

<210> 5027

<211> 359

<212> DNA

<213> Homo sapiens

<400> 5027

ngcggaggcg gggcaggcgc cctgggcgca aggcacggag gcaagggcca gggccagcag
 60
 cagcggggcg agcggggaca tgggtggcagt gcgggcaaga cgcacaagtt ctctgccggc
 120
 acctaccgc gcctggagga gtaccgccgg ggcattcttag gagactggtc caacgetatc
 180
 tccgcgtct actgcagggtg cagctgatgc attgctggtc tctcatctgc agcttccaca
 240

gtacgtcagg aacaccccag gcttgataac cgaggtgcta ccaagatact agctgattgg
660
tgggccgttc ttgatccaaa ggaaaagcag aaatacacag acatggccaa ggagtataag
720
gatgcattta tgaaagcaaa tcctggctac aaatgggtgc ctaccacaaa caagcctgtg
780
aaatccccac acccactgtc aatccacgaa agaaactttg ggccttccca tctgactctt
840
caagagactt gccaaagcccc aagaaagcaa agactgaaga aatgcctcag cttactttg
900
gaatggctga tctactcaa atgggaggcc tgagtatgct gctgttagct ggagaacatg
960
ctcttggcac accagaggta tcctctggca catgcaggcc tgatgtttca gaatctcctg
1020
aattacgtca gaagtcacca ttgtttcagt ttgccgagat atcttcaagt acgtccact
1080
ctgatgcttc tacaaagcag tgtcaaacat ctgccttggt tcagtttgca gagatttctt
1140
caaacacttc gcagttgggt ggtgctgagc ctgtaaaacg ctgtggaaag tctgcactct
1200
ttcaactggc agagatgtgc ctggcatcag aagggatgaa aatggaagaa tcaaagctaa
1260
taaaagcaaa agaatccgat ggtggaagaa ttaaagaatt agagaaggga aaggaagaaa
1320
aagaaattaa aatggagaaa acagatgaaa ctaggttaca gaaggaagca gaatttgaaa
1380
aatcggctaa ggaaaattta agagattcta aggaattgag aaattttgag gcattgcaaa
1440
tagatgacat aatggctata aaaatggaag atcccaaaga aattagaaag gaagagttag
1500
aagaagatca caaatgtagt cattttcctg atttttctta ttctgccagt agcaagataa
1560
taattagtga tgttcccagt agaaaggatc atatgtgcca tcctcatgga attatgatca
1620
ttgaggatcc cgcagcatta aacaagccag aaaagctaaa aaagaaaaag aagaaaagca
1680
aaatggatcg acatggaaat gataaatcca caccaagaa gacttgcaaa aagaggcagt
1740
cttcggaatc tgacattgag agcgtcatat ataccattga agccgtcgca aaaggagact
1800
ggggcataga gaaacttgga gataccctc gcaagaaggt ccgcacatcc tcaagtggca
1860
agggaagcat tttggatgcc aagccaccaa agaaaaaagt gaaatcaaga gagaagaaaa
1920
tgtcaaagga gaaatcctca gacaccacca aagagtcaag acctccagat ttcattagta
1980
tttctgctag caagaacatt tctggtgaga caccagaggg tataaaagca gaaccattga
2040
cccctatgga agatgcacta ccaccagcc tatcaggaca ggccaagcct gaggacagtg
2100
actgtcacag aaaaatagaa acttgtggtt ccaggaaatc cgagaggtct tgcaaagggtg
2160
ctctttataa aaccctgggtg tctgagggca tgctcacctc tctgcgagct aatgttgaca
2220

```

      115              120              125
Asn Val Thr Phe Leu Phe Pro Leu Glu Thr Leu Gln Ile Leu Thr Val
      130              135              140
Gly Met Ile Ser Ser Gly Val Asp Trp Thr Ala Trp Gly Gly Gly Arg
145              150              155              160
Ser Gly Gly Ser Glu Xaa Val Ala Cys Leu Gln Gln Ala Ala Ser Thr
      165              170              175
Pro Ala Ser Cys Ile Arg Pro Thr Asn Ala Gly Val Leu Ser Thr Thr
      180              185              190
Pro Ser Gly Lys Ser Val Gly Glu Ala His Ser Val Ser Pro Pro Pro
      195              200              205
Arg Arg Gly Val Thr Ser Val Ile Lys Leu Leu Ser Leu Leu Trp Lys
      210              215              220
His Val Asp Cys Ala Arg Ala Arg Pro Thr Gly Ser Cys Thr Pro Glu
225              230              235              240
Gln Gln Gly Ile Leu Glu Lys Glu Leu Leu Val Arg Tyr Leu Glu Gln
      245              250              255
Arg Arg Gly Lys Ser Arg Ala Ile Gly Cys Asp Glu Val Thr Pro Phe
      260              265              270
Cys Pro Thr Thr Ser Gly Thr Asp Phe Pro Ser Leu Gln Ser Lys Ala
      275              280              285
Gly Leu Ile Ser Val Asn Ser Gly Ala Pro Ala Ser His Glu Cys Ala
      290              295              300
Pro Trp Val Pro Ser Pro Leu Ser Ile Ser Leu Ser Arg Leu Asp Leu
305              310              315              320
Gly Ser Gly

```

<210> 5025

<211> 2596

<212> DNA

<213> Homo sapiens

<400> 5025

```

ngttgcatgt actgtatgtg gagcagtgt cagtgaagcg gaggcagagc ggctccgcga
60
gcttctctcc actttcccat agagaaaccc tgactggccg ctgagggcta gctacacaca
120
cgccctcagc cccggcgagc ccgcgaggtc actatcatat gacaaaggct ttgccgcagt
180
tcattcttct cctgtgtac ttccatttg ccttcttga atcctgttg catcacagaa
240
gctggaagtt gtgatgttcc actgaaatca caatggaaag tctgacttga ctggtcacag
300
taatgaaagg cagtaataga aataaggatc attcagcaga aggagaagg gttggaaaac
360
gacaaaacg aaagtgtgct ttcagtggca tccatttgct agcaaagaaa cttcttgatt
420
tttcagaaga ggaagaagag gaagacgaag aggaggatat tggataaggt tcaacttctt
480
gggggcccga ggcctaagag caagagtgtg gtgaaactga agatggatga atcaccagag
540
cagcgagccc ggagaccaat gaatgcattt cttttatttt gcaaacgcca tcgctctctt
600

```

ataggggtgtg atgaagtcac ccctttctgt ccactacat ctgggactga ctttccgagc
 2640
 ctccagtcga aagccggctt gatttccgtg aactctgggtg ctctgcac tcattgagtgt
 2700
 gccccatggg tcccccccc tctcagcatt tccttgtccc gtctggacct ggggagtggg
 2760
 taggcagcaa gctttgggtt atgggtttca ttcattgggtg aagtaaatta ggcagtgcta
 2820
 aagcctgtgg gtttggctct tgaacaagat gtgggccttg caagatggga gagtaaacct
 2880
 tgaagggctt tattaaagaa ataaaaaaga acttttgtat cttttatcct gggagcactg
 2940
 cgttttccta gctgtgttat tcctgggtta attcagcaga gaaggtaagg tgtgaaccta
 3000
 cctgccttgg agagggccca ggtcccaaat ctcttcaaat tcttcacatg ttttaacttta
 3060
 aggatttgaa ccatgaagtc ataggttaca gacctcagtt ttatgcccc ttggattact
 3120
 tttttttttt ttttttttta ctcttgaaa gctttgtttt gtggtagtcc ttttggaag
 3180
 aatccagtat tatctacaat tattggcaaa gtttaaagt atttacata acgaaagt
 3240
 tttagaatgt tgaaaagtaa ttgaaaaagg tgataggtaa attttaggc aaagataatt
 3300
 tatttcaata aatctttcaa aagccttacc ttgaaatgct gttagtaaat ttctgtgatt
 3360
 tttttttttt aatttgtttt gctgagagca tagctatttg tttttattgt aaaacaataa
 3420
 taataataaa aagcaaactc taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3480
 aa
 3482

<210> 5024

<211> 323

<212> PRT

<213> Homo sapiens

<400> 5024

Met	Arg	Asp	Ser	Ala	Cys	Trp	Xaa	Gln	Arg	Lys	Asp	Glu	Leu	Leu	Gln
1				5				10					15		
Gln	Ala	Arg	Lys	Arg	Phe	Leu	Asn	Lys	Ser	Ser	Glu	Asp	Asp	Ala	Ala
			20				25					30			
Ser	Glu	Ser	Phe	Leu	Pro	Ser	Glu	Gly	Ala	Ser	Ser	Asp	Pro	Val	Thr
		35				40					45				
Leu	Arg	Arg	Arg	Met	Leu	Ala	Ala	Ala	Arg	Asn	Gly	Gly	Phe	Arg	Ser
	50				55				60						
Ser	Arg	Pro	Pro	Ser	Ala	Pro	Leu	Pro	Ser	Ser	Ala	Ala	Ser	Cys	Ala
65				70				75					80		
Leu	Cys	Pro	Thr	Asp	Trp	Arg	Arg	Pro	Val	Pro	Ile	Leu	Pro	Leu	His
			85			90					95				
Gly	Lys	Ala	Gly	Leu	Thr	Ala	Leu	Pro	Leu	Tyr	Lys	Ala	Cys	Gly	Leu
		100				105					110				
Ile	Val	Phe	Gly	Gln	Leu	Ile	Asn	Leu	Ile	Leu	Leu	Cys	Asn	Thr	Phe

gttacctgtt tcatgaggtg caacgtcgaa ttcgtcggca caagaactat ctacgtgtgg
1020
ttggaaacat ggaggccagg tttgcagttg caactccaga ggagctggct gtcaacaatg
1080
acgactgtgc catctgttgg gactccatgc aggctgcgcg gaaactgccc tgtggacatc
1140
ttttccacaa ctctgtctt cgttcctggc tagaacaaga cacctcctgt ccaacatgca
1200
gaatgtctct taatattgcc gacaataatc gtgtcaggga agaacatcaa ggagagaact
1260
tggatgagaa tttggttcct gtagcagcag ccgaaggag acctcgctta aaccaacaca
1320
atcacttctt ccatttcgat gggctctcgga ttgcgagctg gctgccgagt ttttcggttg
1380
aagtgtatgca caccaccaac attcttggca ttacgcaggc cagcaactcc cagctcaatg
1440
caatggctca tcagattcaa gagatgtttc ccaggttcc ataccatctg gtactgcagg
1500
acctccagct gacacgtca gttgaaataa caacagacaa tattttagaa ggacggattc
1560
aagtaccttt tcctacacag cggtcagata gcatcagacc tgcattgaac agtctgtgtg
1620
aaaggccaag cagtgaccag gaagaggag aaacttctgc tcagaccgag cgtgtgccac
1680
tggacctcag tcctcgctg gaggagacgc tggacttcgg cgagggtggaa gtggagccca
1740
gtgagggtga agacttcgag gctcgtggga gccgcttctc caagtctgct gatgagagac
1800
agcgcatgct ggntgcagcg taaggacgaa ctctccagc aagctcgcaa acgtttcttg
1860
aacaaaagtt ctgaagatga tgcggcctca gagagcttcc tcccctcgga aggtgcgtcc
1920
tctgaccccg tgacctgcg tcgaaggatg ctggctgccg cccggaacgg aggttcaga
1980
agcagcagac ctctagcgc tcccttgctt tcctcagctg cctctgccc cctgtgccc
2040
actgactgga ggaggcctgt cccaattctg ccgctccatg gaaaagcggg cttgactgca
2100
ttgccgctgt ataaagcatg tggctctata gtgtttggac agctgataaa tttaatcctt
2160
ctttgtaata ctttcaatgt gacatttctc tcccccttag aaacttgca aattttaact
2220
gtaggtatga tctcttctgg tgttgactgg actgcttggg gtgggggacg atcaggagga
2280
agtgagncag tcgcctgcct gcagcaggca gcttctactc ctgcctcatg catacgtccc
2340
acaaatgcag gtgtcctgag caccacaccc agtgggaaga gtgtggggga ggcgcacagt
2400
gtgagccgc cccacgtcg tggggaaca tctgttatca aactgctgtc gttgttgttg
2460
aagcatgtag actgtgccag agccagaccc acgggctcat gcaccctga gcagcagggc
2520
atcttggaag aggaactctt ggttcgatac ctggagcaga ggaggggaaa gtccagggct
2580

1		5		10		15									
Phe	Glu	Val	Leu	Arg	Gln	His	Ser	Thr	Gly	Asp	Leu	Gln	Tyr	Ser	Pro
		20		25		30									
Asp	Tyr	Lys	Asn	Tyr	Leu	Ala	Leu	Ile	Asn	His	Arg	Pro	His	Val	Lys
		35		40		45									
Gly	Asn	Ser	Ser	Cys	Tyr	Gly	Val	Leu	Pro	Thr	Glu	Glu	Pro	Val	Tyr
	50			55		60									
Asn	Trp	Arg	Thr	Val	Ile	Asn	Ser	Ala	Ala	Asp	Phe	Tyr	Phe	Glu	Gly
65				70		75								80	
Asn	Ile	His	Gln	Ser	Leu	Gln	Asn	Ile	Thr	Glu	Asn	Gln	Leu	Val	Gln
		85		90		95									
Pro	Thr	Ile	Leu	Gln	Gln	Lys	Gly	Gly	Lys	Gly	Arg	Lys	Lys	Leu	Arg
		100		105		110									
Leu	Phe	Glu	Tyr	Leu	His	Glu	Ser	Leu	Cys	Asn	Pro				
		115		120											

<210> 5023

<211> 3482

<212> DNA

<213> Homo sapiens

<400> 5023

```

gggccgccgc agaggcccg cgcagcgca gggaagcctg ggggccagag gtcgccgctg
60
ccgccatgcc gctgctcttc ctgagcgct tcccctggcc cagcctccgc acctacacgg
120
gcctcagcgg cctggccctg ctgggcacca tcatcagcgc ctaccgcgcg ctcagccagc
180
ccgaggcccg ccccgcgag ccggaccagc taacggcctc gctgcagcct gagccgcgg
240
cgcccgcgg gccgagcgcc gggggacccc gggcccgga tgtggcccag tacctgctct
300
cagacagcct cttcgtgtgg gttctagtaa ataccgcttg ctgtgttttg atgttggtg
360
ctaagctcat ccagtgtatt gtgtttggcc ctcttcgagt gagtgcagaga cagcatctca
420
aagacaaatt ttggaatttt atttctaca agttcatttt catctttggt gtgctgaatg
480
tccagacagt ggaagaggtg gtcattgtgt gcctctggtt tgccggactt gtctttctgc
540
acctgatggt tcagctctgc aaggatcgat ttgaatatct ttccttctcg cccaccacgc
600
cgatgagcag ccacggtcga gtectgtccc tgttggttgc catgctgctt tctgctgtg
660
gactggcgcc cgtctgtcc atcaccggct acaccacgg aatgcacacc ttggctttca
720
tggtgcaga gtctcttctt gtgacagtga ggactgtca tgtgatttta cgatacgtaa
780
ttcacctctg ggacctcaac cacgaagga cgtgggaagg aaaggggacg tatgtctatt
840
acacagactt tgtcatggag ctactctcc tgtccctgga cctcatgcac catattcaca
900
tggtgttatt tggcaacatc tggttatcca tggccagcct ggtcatcttt atgcagctgc
960

```


catcttacct gcttatgtct cctacacaaa gctaaatatt ctagcagtga tgtaatgaaa
 2520
 aattacatct tactgttgat atatgtatgc tctggtacac agatgtcatt ttgttgctac
 2580
 agcactacag tgaaatacac aaaaaatgaa attcatataa tgacttaaat gtatttatg
 2640
 ttagaattga caacataaac tacttttgct ttgaaatgat gtatgcttca gtaaaatcat
 2700
 attcaaattt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2760
 aaaaaa
 2766

<210> 5020

<211> 433

<212> PRT

<213> Homo sapiens

<400> 5020

Xaa Leu Glu Tyr Trp Arg Arg Arg Glu Glu Glu Arg Trp Arg Met
 1 5 10 15
 Glu Met Arg Arg Tyr Glu Glu Asp Met Tyr Trp Arg Arg Met Glu Glu
 20 25 30
 Glu Gln His His Trp Asp Asp Arg Arg Arg Met Pro Asp Gly Gly Tyr
 35 40 45
 Pro His Gly Pro Pro Gly Pro Leu Gly Leu Leu Gly Val Arg Pro Gly
 50 55 60
 Met Pro Pro Gln Pro Gln Gly Pro Ala Pro Leu Arg Arg Pro Asp Ser
 65 70 75 80
 Ser Asp Asp Arg Tyr Val Met Thr Lys His Ala Thr Ile Tyr Pro Thr
 85 90 95
 Glu Glu Glu Leu Gln Ala Val Gln Lys Ile Val Ser Ile Thr Glu Arg
 100 105 110
 Ala Leu Lys Leu Val Ser Asp Ser Leu Ser Glu His Glu Lys Asn Lys
 115 120 125
 Asn Lys Glu Gly Asp Asp Lys Lys Glu Gly Gly Lys Asp Arg Ala Leu
 130 135 140
 Lys Gly Val Leu Arg Val Gly Val Phe Ala Lys Gly Leu Leu Leu Arg
 145 150 155 160
 Gly Asp Arg Asn Val Asn Leu Val Leu Leu Cys Ser Glu Lys Pro Ser
 165 170 175
 Lys Thr Leu Leu Ser Arg Ile Ala Glu Asn Leu Pro Lys Gln Leu Ala
 180 185 190
 Phe Ile Ser Pro Glu Lys Tyr Asp Ile Lys Cys Ala Val Ser Glu Ala
 195 200 205
 Ala Ile Ile Leu Asn Ser Cys Val Glu Pro Lys Met Gln Val Thr Ile
 210 215 220
 Thr Leu Thr Ser Pro Ile Ile Arg Glu Glu Asn Met Arg Glu Gly Asp
 225 230 235 240
 Val Thr Ser Gly Met Val Lys Asp Pro Pro Asp Val Leu Asp Arg Gln
 245 250 255
 Lys Cys Leu Asp Ala Leu Ala Ala Leu Arg His Ala Lys Trp Phe Gln
 260 265 270
 Ala Arg Ala Asn Gly Leu Gln Ser Cys Val Ile Ile Ile Arg Ile Leu

tgtgtgatta tcatacgcat tcttcgagac ctctgtcagc gagttccaac ttggtctgat
900
tttccaagct gggctatgga gttactagta gagaaagcaa tcagcagtg ctttagccct
960
cagagccctg gggatgcact gagaagagtt tttgaatgca tttcttcagg gattattctt
1020
aaaggtagtc ctggacttct ggatccttgt gaaaaggatc cctttgatac cttggcaaca
1080
atgactgacc agcagcgtga agacatcaca tccagtgcac agtttgcat gagactcctt
1140
gcattccgcc agatacaca agttctagga atggatccat taccgcaa at gagccaacgt
1200
ttaacatcc acaacaacag gaaacgaaga agagatagtg atggagtga tggatttgaa
1260
gctgagggga aaaaagacaa aaaagattat gataactttt aaaaagtgtc tgtaaatctt
1320
cagtgttaaa aaaacagatg cccatttgtt ggctgttttt cattcataat aatgtctaca
1380
ttgaaaaatt tatcaagaat ttaaaggatt tcatggaaga accaagtttt tctatgatat
1440
taaaaaatgt acagtgttag gtattatttg aatggaaaga caccacaaaa aaaaatgtgc
1500
tccgactagg gggaaaacag tagttccgat tttttcccat ttttttatt ttattttctg
1560
gttgccctag cttccccccc ttttttgtg tttttatta actagtgc at tgtcttatta
1620
aatcttcact gtatttaatg caggatgtgt gcttcagttg ctctgtgtat tttgatattt
1680
taatttagag gttttgtttg ctttttgaca ctagtgttaa gttactttgt tatagatggt
1740
atcctttacc cttctttaat attttacagc agtacgtttt tttgtaacgt gagactgcag
1800
agtttgtttt tctatatgtg aaggattaca acacaaaaag ttatcctgcc attcagatgc
1860
tcagaactga atgtttctgc agatcttgtg gcatttgtct ctagtgtgat atataaagg
1920
gtaattaaga cagagttctg ttaatcta at caagtttgct gttagtgtg cattagcagt
1980
ataaaagcta atatatacta tatggctctg caacagtttt aaagcctctg cataattgat
2040
aataaaaatg catgacattc ttgttttta tagactttta aaatcataat tttaggttta
2100
acacgtagat ctttgtacag ttgacttttt gacatagcaa ggccaaaaat aactttctga
2160
atattttttt cttgtgtata agtggaagg gcatttttca catataagt ggctaacc
2220
tattttcaaa agaacttcatt cattgtacaa ctaacaacag taactagccc ttaattatgg
2280
tgacagttcc ttattggtgt gtgtgagatt actctagcaa ctattacagt ataacacaga
2340
tgatcttctc cacacacccc atcaccaga taatttacag ttctgttaac agtgaggttg
2400
ataaagtatt actgataaaa aattatctaa ggaaaaaac agaaaattat ttggtgtggc
2460

tagcgttctg tctcattacg agcaaataaa tagactttca ttggaaaaaa aaaaaaaaaa
 780
 aaaaaa
 785

<210> 5018
 <211> 63
 <212> PRT
 <213> Homo sapiens

<400> 5018
 Gly Pro Ser Ala Ser Glu Gly Arg Asp Ala Val Ser Ala Ala Gly Ala
 1 5 10 15
 Ser His Thr Ser Ser Ile Leu Ser Thr Leu His Ser Lys Cys Cys Leu
 20 25 30
 Leu Pro Ala Leu Pro Ser Asp Ala Gly Val Gly Trp Gly Ala Glu Gly
 35 40 45
 Pro Pro Ser Ile Ala Ala Val Ser Gln Ser His Gly Arg Arg Ser
 50 55 60

<210> 5019
 <211> 2766
 <212> DNA
 <213> Homo sapiens

<400> 5019
 nngctcgagt actggcgaag acgagaagaa gaggagcgtt ggagaatgga aatgagacgt
 60
 tatgaagagg acatgtactg gaggagaatg gaggaagaac aacatcattg ggatgatcgc
 120
 cgccgaatgc cagatggagg ttatcctcat ggtcctccag gcccattagg ccttctggga
 180
 gtccgaccag gcatgcctcc tcagcctcag gggcctgcac ccttacgtcg tctgactca
 240
 tctgatgacc gttatgtaat gacaaaacat gccaccattt atccaactga agaggagtta
 300
 caggcagttc agaaaattgt ttctattact gaacgtgctt taaaactcgt ttcagacagt
 360
 ttgtctgaac atgagaagaa caagaacaaa gagggagatg ataagaaaga gggaggtaaa
 420
 gacagagctt tgaaaggagt tttgcgagtg ggagtatttg caaaaggatt acttctccga
 480
 ggagatagaa atgtcaacct tgttttgctg tgctcagaga aaccttcaaa gacattatta
 540
 agccgtattg cagaaaacct acccaaacag cttgctttta taagccctga gaagtatgac
 600
 ataaaatgtg ctgtatctga agcggcaata attttgaatt catgtgtgga acccaaatg
 660
 caagtcacta tcacactgac atctccaatt attcgagaag agaacatgag ggaaggagat
 720
 gtaacctcgg gtatggtgaa agaccaccg gacgtcttgg acaggcaaaa atgccttgac
 780
 gctctggctg ctctacgcca cgctaagtgg ttccaggcta gagctaattg tctgcagtcc
 840

```
<210> 5017
<211> 785
<212> DNA
<213> Homo sapiens
```

```

<400> 5017
gggccctcag cctctgaggg cagagatgct gtcagtgccg caggtgcac acatacttct
60
agcatcctct ccaccctgca ttccaaatgc tgcttgctgc ctgccctgcc ctccgatgca
120
gggggtggggg gggggggcgga gggcccgcgc agcatagctg cagtgtcaca aagccatggc
180
agaaggtcct agcggcgcca ccctgccccca gcctgaggag gagggagagg gaggaacaac
240
cctgggcaga cggggcctca gggacctgtg tccttcgcgc tccagagctg cccagccacg
300
ggctctcagg gtgctggggc agccccaggt cccctcttga actcagctgg ggccaggggc
360
cctcagaatg aaggcaggca ccaggcagga gcagcatccc cctccttgac ggtgctggca
420
ggagggcgcg gccatgctga ctgcttgaac ctctgctgac ctgacagtgc tggcgggagg
480
gccgcaccat gctgactgcc tgaatctctg ctgaggctgc ctgcctgccg ggcccagctc
540
agcgccctct ccaactgcga tcagtggcga tcatgtgatt tctatttctg cccacaggg
600
taagggaacga gtcttctgga aggctctgcc atggacattt gtccctcgggc tcagaggccc
660
caccctgccc cacacctgcc cctaatact gacagtgtcca gccagtggt gaacagattg
720

```

aatgccgtgc ccacggtggt cgcctttcag gacccacac agcaggtgag ggagaacaca
 420
 gaccctgcca gtgagagagg aaatgccagc tcttctcaga aagaaaaggt cctccctgag
 480
 gcgggggccc gagaggacag tcctgggaga aacatggaca ctgcacttga agagcttcag
 540
 ttgcccccaa atgccgaagg ccacgtaaaa caggtctcgc cacggaggcc gcaagcaaca
 600
 gaggtctgtg gccggccgac tggccctgca ggcctgagaa ggacccccaa caagcagcca
 660
 tctgatcaca gctatgcctt tttggactta gattccctga agaaaaaact cttcctcact
 720
 ctgaaggaaa atgaaaagct ccggaagcgc ttgcaggccc agaggctggt gatgccaagg
 780
 atgtccagcc gcctccgtgc ttgcaaaggg caccggggac tccaggccag acttggggcca
 840
 gagcagcaga gctgagcccc acaggctccg gacgcagagg tggcagtggc accagggccc
 900
 gcagagcttt ggagctctgg ctgtggacat ttttgtctgc tgtggacact gagaaagttg
 960
 gccatgaggc ctgcttgccc ggggatcgag acagtagcca agctccccgg cgagagcccc
 1020
 aatgccgtct gggggacgtt tagaggcgtg gcactaggag tgcacatctg tgagcatgac
 1080
 aagcttatcc tcccatggtg acagaagtcc aggctgaggc tgattctgga cgctgtcctt
 1140
 tcagcacacg cagagcaaag atcgttggaa gccccagtgt gggagatgct cctcagggag
 1200
 gaagccatgt gagggggctg gctctgtggc gggtagtggt tcccctcctc catcagcctg
 1260
 gacagccgct cggggttcta aggagtgact cctgtcccgg cctggtgtga gtgggcagtg
 1320
 taataaagtg tctttctata cggaaaaaaa aaaaaaaaaa
 1360

<210> 5016

<211> 284

<212> PRT

<213> Homo sapiens

<400> 5016

Met	Ser	Ala	Pro	Trp	Arg	Arg	Ala	Arg	Pro	Val	Thr	Thr	Ser	Gln	Arg
1				5					10					15	
Pro	Arg	Pro	Ser	Pro	Gln	Val	Pro	Pro	Leu	Ser	Ala	Gly	Pro	Ala	Ala
			20					25					30		
Ala	Ala	Ile	Phe	Val	Gly	Gly	Ser	Gln	Ala	Trp	Leu	Glu	Met	Pro	Lys
		35					40					45			
Ser	Cys	Ala	Ala	Arg	Gln	Cys	Cys	Asn	Arg	Tyr	Ser	Ser	Arg	Arg	Lys
	50				55					60					
Gln	Leu	Thr	Phe	His	Arg	Phe	Pro	Phe	Ser	Arg	Pro	Glu	Leu	Leu	Lys
65				70					75					80	
Glu	Trp	Val	Leu	Asn	Ile	Gly	Arg	Gly	Asn	Phe	Lys	Pro	Lys	Gln	His
			85					90						95	
Thr	Val	Ile	Cys	Ser	Glu	His	Phe	Arg	Pro	Glu	Cys	Phe	Ser	Ala	Phe

405 410 415
 Asp Gln Pro Cys Leu Cys Pro Ala Pro Ser Val Arg Thr Ala Val Ala
 420 425 430
 Leu Thr Thr Pro Asp Ile Thr Leu Val Leu Pro Pro Asp Val Ile Gln
 435 440 445
 Gln Glu Ala Ser Ala Leu Arg Glu Glu Thr Glu Ala Trp Ala Arg Pro
 450 455 460
 His Glu Ser Leu Ala Arg Glu Glu Ala Leu Thr Ala Leu Gly Lys Leu
 465 470 475 480
 Leu Tyr Leu Leu Asp Gly Met Leu Asp Gly Gln Val Asn Ser Gly Ile
 485 490 495
 Ala Ala Thr Pro Ala Ser Ala Ala Ala Thr Leu Asp Val Ala Val
 500 505 510
 Arg Arg Gly Leu Ser His Gly Ala Gln Arg Leu Leu Cys Val Ala Leu
 515 520 525
 Gly Gln Leu Asp Arg Pro Pro Asp Leu Ala His Asp Gly Arg Ser Leu
 530 535 540
 Trp Leu Asn Ile Arg Gly Lys Glu Ala Ala Ala Leu Ser Met Phe His
 545 550 555 560
 Val Ser Thr Pro Leu Pro Val Met Thr Gly Gly Phe Leu Ser Cys Ile
 565 570 575
 Leu Gly Leu Val Leu Pro Leu Ala Tyr Gly Phe Gln Pro Asp Leu Val
 580 585 590
 Leu Val Ala Leu Gly Pro Gly His Gly Leu Gln Gly Pro His Ala Ala
 595 600 605
 Leu Leu Ala Ala Met Leu Arg Gly Leu Ala Gly Gly Arg Val Leu Ala
 610 615 620
 Leu Leu Glu Glu Val Ser Trp Ala Gly Trp Arg Cys Cys Gly Val Gly
 625 630 635 640
 Arg Gly Glu Gly Pro Val Thr Ala Ser Val Phe Ala Pro Gly Pro Glu
 645 650 655
 Leu His Thr Pro Ala Ser Arg Asp Pro Gly Pro Gly Ala Glu Trp Arg
 660 665 670
 Gly Thr Ser
 675

<210> 5015

<211> 1360

<212> DNA

<213> Homo sapiens

<400> 5015

atgagcgcgc cctggaggcg agccaggccc gtcaccacct cccagcggcc cgcgccctcc
 60
 ccgcaggtcc ctcccccttc cgcaggcccc gccgccgccg ccatctttgt tgggggcagc
 120
 caggcctggc tcgagatgcc gaagtcgtgc ggggccgggc agtgctgcaa ccgctacagc
 180
 agccgcagga agcagctcac ctccaccgg ttccggttca gccgccgga gctgctgaag
 240
 gaatgggtgc tgaacatcgg ccggggcaac ttcaagccca agcagcacac ggtcatctgc
 300
 tccgagcact tccggccaga gtgcttcagc gcctttggaa accgcaagaa cctaaagcac
 360

<213> Homo sapiens

<400> 5014

```

Arg Gly Arg Leu Gly Thr Gln Gly Asp His Gly Ala Ala Met Gly Thr
 1           5           10           15
Ala Leu Val Tyr His Glu Asp Met Thr Ala Thr Arg Leu Leu Trp Asp
 20           25           30
Asp Pro Glu Cys Glu Ile Glu Arg Pro Glu Arg Leu Thr Ala Ala Leu
 35           40           45
Asp Arg Leu Arg Gln Arg Gly Leu Glu Gln Arg Cys Leu Arg Leu Ser
 50           55           60
Ala Arg Glu Ala Ser Glu Glu Glu Leu Gly Leu Val His Ser Pro Glu
 65           70           75           80
Tyr Val Ser Leu Val Arg Glu Thr Gln Val Leu Gly Lys Glu Glu Leu
 85           90           95
Gln Ala Leu Ser Gly Gln Phe Asp Ala Ile Tyr Phe His Pro Ser Thr
 100          105          110
Phe His Cys Ala Arg Leu Ala Ala Gly Ala Gly Leu Gln Leu Val Asp
 115          120          125
Ala Val Leu Thr Gly Ala Val Gln Asn Gly Leu Ala Leu Val Arg Pro
 130          135          140
Pro Gly His His Gly Gln Arg Ala Ala Ala Asn Gly Phe Cys Val Phe
 145          150          155          160
Asn Asn Val Ala Ile Ala Ala Ala His Ala Lys Gln Lys His Gly Leu
 165          170          175
His Arg Ile Leu Val Val Asp Trp Asp Val His His Gly Gln Gly Ile
 180          185          190
Gln Tyr Leu Phe Glu Asp Asp Pro Ser Val Leu Tyr Phe Ser Trp His
 195          200          205
Arg Tyr Glu His Gly Arg Phe Trp Pro Phe Leu Arg Glu Ser Asp Ala
 210          215          220
Asp Ala Val Gly Arg Gly Gln Gly Leu Gly Phe Thr Val Asn Leu Pro
 225          230          235          240
Trp Asn Gln Val Gly Met Gly Asn Ala Asp Tyr Val Ala Ala Phe Leu
 245          250          255
His Leu Leu Leu Pro Leu Ala Phe Glu Phe Asp Pro Glu Leu Val Leu
 260          265          270
Val Ser Ala Gly Phe Asp Ser Ala Ile Gly Asp Pro Glu Gly Gln Met
 275          280          285
Gln Ala Thr Pro Glu Cys Phe Ala His Leu Thr Gln Leu Leu Gln Val
 290          295          300
Leu Ala Gly Gly Arg Val Cys Ala Val Leu Glu Gly Gly Tyr His Leu
 305          310          315          320
Glu Ser Leu Ala Glu Ser Val Cys Met Thr Val Gln Thr Leu Leu Gly
 325          330          335
Asp Pro Ala Pro Pro Leu Ser Gly Pro Met Ala Pro Cys Gln Arg Cys
 340          345          350
Glu Gly Ser Ala Leu Glu Ser Ile Gln Ser Ala Arg Ala Ala Gln Ala
 355          360          365
Pro His Trp Lys Ser Leu Gln Gln Asp Val Thr Ala Val Pro Met
 370          375          380
Ser Pro Ser Ser His Ser Pro Glu Gly Arg Pro Pro Pro Leu Leu Pro
 385          390          395          400
Gly Gly Pro Val Cys Lys Ala Ala Ala Ser Ala Pro Ser Ser Leu Leu

```

gactacgtgg ctgccttctt gcacctgctg ctcccactgg cctttgagtt tgacctgag
1080
ctggtgctgg tctcggcagg atttgactca gccatcgggg accctgaggg gcaaatgcag
1140
gccacgccag agtgcttcgc ccacctcaca cagctgctgc aggtgctggc cggcggccgg
1200
gtctgtgccc tgctggaggg cggctaccac ctggagtcac tggcggagtc agtgtgcatg
1260
acagtacaga cgctgctggg tgaccgggcc ccacctctgt cagggccaat ggcgccatgt
1320
cagagtgctg aggggagtg cctagagtc atccagagtg cccgtgctgc ccaggccccg
1380
cactggaaga gcctccagca gcaagatgtg accgctgtgc cgatgagccc cagcagccac
1440
tccccagagg ggaggcctcc acctctgctg cctgggggtc cagtgtgtaa ggcagctgca
1500
tctgcaccga gctccctctt ggaccagccg tgctctgccc ccgcacctc tgtccgcacc
1560
gctgttgcct tgacaacgcc ggatatcaca ttggttctgc cccctgacgt catccaacag
1620
gaagcgtcag ccctgagggg ggagacagaa gcctgggcca ggccacacga gtccctggcc
1680
cgggaggagg ccctcactgc acttgggaag ctctgtacc tcttagatgg gatgctggat
1740
gggcaggtga acagtggat agcagccact ccagcctctg ctgcagcagc caccctggat
1800
gtggctgttc ggagaggcct gtcccacgga gccagaggc tgctgtgctg ggccctggga
1860
cagctggacc ggctccaga cctcgcccat gacgggagga gtctgtggct gaacatcagg
1920
ggcaaggagg cggctgcctt atccatgttc catgtctcca cgccactgcc agtgatgacc
1980
ggtgggttcc tgagctgcat cttgggcttg gtgctgcccc tggcctatgg cttccagcct
2040
gacctggtgc tgggtggcgt ggggcctggc catggcctgc agggccccca cgctgcactc
2100
ctggctgcaa tgcttcgggg gctggcaggg ggccgagtc tggccctcct ggaggaggta
2160
agctgggcag ggtggaggtg ctgcgggggtg ggacgagggg aaggaccagt gactgcttcc
2220
gtcttcgccc ctggtccaga actccacacc ccagctagca gggatcctgg cccgggtgct
2280
gaatggagag gcacctcta gcctaggccc ttcctctgtg gcctccccag aggacgtcca
2340
ggccctgatg tacctgagag ggcagctgga gcctcagtg aagatgttgc agtgccatcc
2400
tcacctggtg gcttgaaatc ggccaagggt ggagcattta caccgcagaa atgacaccgc
2460
acgccagcgc cccgaggccg
2480

<210> 5014

<211> 675

<212> PRT

850		855		860											
Pro	Gln	Asp	Ser	Trp	Arg	Gly	Pro	Pro	Pro	Leu	Phe	Gln	Gln	Gln	Arg
865					870					875					880
Phe	Asp	Arg	Gly	Val	Gly	Ala	Glu	Pro	Leu	Leu	Pro	Trp	Asn	Arg	Met
			885						890					895	
Leu	Gln	Thr	Gln	Asn	Ala	Ala	Phe	Gln	Pro	Asn	Gln	Tyr	Gln	Met	Leu
		900						905					910		
Ala	Gly	Pro	Gly	Gly	Tyr	Pro	Pro	Arg	Arg	Asp	Asp	Arg	Gly	Gly	Arg
	915						920					925			
Gln	Gly	Tyr	Pro	Arg	Glu	Gly	Arg	Lys	Tyr	Pro	Leu	Pro	Pro	Pro	Ser
	930					935					940				
Gly	Arg	Tyr	Asn	Trp	Asn										
945					950										

<210> 5013

<211> 2480

<212> DNA

<213> Homo sapiens

<400> 5013

```

nccggggcgg agctcgcgat agcgaccggg agcagggcgc ggggcgggac ccagggtccga
60
ggcgaggaag ccggaagcca ggcgcgggga gcctccccct tcgactgcag cctcgctccg
120
tgctttctgc ggccttggga tcccgagacc tgcttaggtt ctgtgcgctc ccgcccaggc
180
cgggtgcccgc cgccgcgctg cgccccaggc aggtcccagg cctccggctg ctcccggccg
240
aaggtgggga caggcagtgg caggcaccac tagcgagggc gtttgggaac ccagggtgac
300
cacggcgag ccattggggac cgcgcttctg taccatgagg acatgacggc caccgggctg
360
ctctgggacg accccgagtg cgagatcgag cgtcctgagc gcctgaccgc agccctggat
420
cgcttgcggc agcgcgccct ggaacagagg tgtctgcggt tgtcagcccg cgaggcctcg
480
gaagaggagc tgggcctggt gcacagccca gagtatgtat ccctggtcag ggagaccag
540
gtcctaggca aggaggagct gcaggcgtg tccggacagt tcgacgccat ctacttccac
600
ccgagtacct ttactgcgc gcggctggcc gcaggggctg gactgcagct ggtggacgct
660
gtgctcactg gagctgtgca aaatgggctt gccctgggta ggctccccg gcaccatggc
720
cagagggcgg ctgccaacgg gttctgtgtg ttcaacaacg tggccatagc agctgcacat
780
gccaaagcaga aacacgggct acacaggatc ctgcctgtgg actgggatgt gcaccatggc
840
caggggatcc agtatctctt tgaggatgac ccagcgtcc ttactttctc ctggcaccgc
900
tatgagcatg ggcgcttctg gcctttctct cgagagtcag atgcagacgc agtggggcgg
960
ggacagggcc tcggcttcac tgtcaacctg ccctggaacc aggttgggat gggaaacgct
1020

```


4190

<400> 5012

```

Met Gly Val Pro Ala Phe Phe Arg Trp Leu Ser Arg Lys Tyr Pro Ser
 1           5           10           15
Ile Ile Val Asn Cys Val Glu Glu Lys Pro Lys Glu Cys Asn Gly Val
 20           25           30
Lys Ile Pro Val Asp Ala Ser Lys Pro Asn Pro Asn Asp Val Glu Phe
 35           40           45
Asp Asn Leu Tyr Leu Asp Met Asn Gly Ile Ile His Pro Cys Thr His
 50           55           60
Pro Glu Asp Lys Pro Ala Pro Lys Asn Glu Asp Glu Met Met Val Ala
 65           70           75           80
Ile Phe Glu Tyr Ile Asp Arg Leu Phe Ser Ile Val Arg Pro Arg Arg
 85           90           95
Leu Leu Tyr Met Ala Ile Asp Gly Val Ala Pro Arg Val Lys Met Asn
 100          105          110
Gln Gln Arg Ser Arg Arg Phe Arg Ala Ile Lys Glu Gly Met Glu Ala
 115          120          125
Ala Val Glu Lys Gln Arg Val Arg Glu Glu Ile Leu Ala Lys Gly Gly
 130          135          140
Phe Leu Pro Pro Glu Glu Ile Lys Glu Arg Phe Asp Ser Asn Cys Ile
 145          150          155          160
Thr Pro Gly Thr Glu Phe Met Asp Asn Leu Ala Lys Cys Leu Arg Tyr
 165          170          175
Tyr Ile Ala Asp Arg Leu Asn Asn Asp Pro Gly Trp Lys Asn Leu Thr
 180          185          190
Val Ile Leu Ser Asp Ala Ser Ala Pro Gly Glu Gly Glu His Lys Ile
 195          200          205
Met Asp Tyr Ile Arg Arg Gln Arg Ala Gln Pro Asn His Asp Pro Asn
 210          215          220
Thr His His Cys Leu Cys Gly Ala Asp Ala Asp Leu Ile Met Leu Gly
 225          230          235          240
Leu Ala Thr His Glu Pro Asn Phe Thr Ile Arg Glu Glu Phe Lys
 245          250          255
Pro Asn Lys Pro Lys Pro Cys Gly Leu Cys Asn Gln Phe Gly His Glu
 260          265          270
Val Lys Asp Cys Glu Gly Leu Pro Arg Glu Lys Lys Gly Lys His Asp
 275          280          285
Glu Leu Ala Asp Ser Leu Pro Cys Ala Glu Gly Glu Phe Ile Phe Leu
 290          295          300
Arg Leu Asn Val Leu Arg Glu Tyr Leu Glu Arg Glu Leu Thr Met Ala
 305          310          315          320
Ser Leu Pro Phe Thr Phe Asp Val Glu Arg Ser Ile Asp Asp Trp Val
 325          330          335
Phe Met Cys Phe Phe Val Gly Asn Asp Phe Leu Pro His Leu Pro Ser
 340          345          350
Leu Glu Ile Arg Glu Asn Ala Ile Asp Arg Leu Val Asn Ile Tyr Lys
 355          360          365
Asn Val Val His Lys Thr Gly Gly Tyr Leu Thr Glu Ser Gly Tyr Val
 370          375          380
Asn Leu Gln Arg Val Gln Met Ile Met Leu Ala Val Gly Glu Val Glu
 385          390          395          400
Asp Ser Ile Phe Lys Arg Lys Asp Asp Glu Asp Ser Phe Arg Arg
 405          410          415
Arg Gln Lys Glu Lys Arg Lys Arg Met Lys Arg Asp Gln Pro Ala Phe

```

ctacgagctg ccctagaaga ggtataccca gacctcactc cagaagagac cagaagaaac
2100
agccttgagg gtgatgtctt atttgtgggg aaacatcacc cactccatga cttcatttta
2160
gagctgtacc agacagggtc cacagagcca gtggaggtag ccctgaact atgtcatggg
2220
attcaaggaa agttttcttt ggatgaagaa gccattcttc cagatcaaata agtatgttct
2280
cctgttccta tgtaaggga tctgacacag aacactgtag tcagtattaa ttttaagac
2340
ccacagtttg ctgaagatta cttttttaa gctgtaatgc ttccaggagc aagaaagcca
2400
gcagcagtag tgaaacctag tgactgggaa aaatccagca atggacggca gtggaagcct
2460
cagcttggtt ttaaccgtga ccggaggcct gtgcacctgg atcaggcagc cttcaggagt
2520
ttgggccatg tgatgccaag aggctcagga actggcattt acagcaatgc tgcaccacca
2580
cctgtgactt accaggaaa cttatacagg ccgcttttga gaggacaagc ccagattcca
2640
aaacttatgt caaatatgag gcccaggat tcctggcgag gtccctctcc ctttttccag
2700
cagcaaaggc ttgacagagg cgttggggct gaacctctgc tcccatggaa ccgatgctg
2760
caaaccaga atgcagcctt ccagccaaac cagtaccaga tgctagctgg gcctgggtgg
2820
tatccacca gacgagatga tcgtggaggg agacagggat atcccagaga aggaaggaaa
2880
tacccttgc caccaccctc aggaagatac aattggaatt aagcttttgc aaagctttcc
2940
caaactcctt catcattcta cagttttatg ctatttggg aaagatttct ttctcaagta
3000
gtagttttta ataaaactac agtactttgt gtatttcttt taactgtgta ttttctact
3060
gatctgatct cactgtttat gttgctttcc aaagatgtat gttgcataat acagtggatc
3120
tgaatttatt attgcttata aaacacattt gatggaatag gagtactggg ttttcataat
3180
ggttaaaaaa gaaaccagct gtggatttca aaacacagtg tattctagat catctaagat
3240
ccatgctgat ttttattgca caagaattag gtttgaactc ttgagctgga acctcagcaa
3300
actagagtat atattgttca gtatttcttt ggaaacattt cattaatgta cttgtcttac
3360
agaaatttct gaactttagt aaaaaaaaaa aaagttaaac ttttaaaact caaaaaaaaaa
3420
aaaaaaaaaa a
3431

<210> 5012

<211> 950

<212> PRT

<213> Homo sapiens

aggttcaggg ccatcaaaga aggaatggaa gcagcagtcg agaagcagcg agtcagggaa
480
gaaatattgg caaaaggtgg ctttcttcct ccagaagaaa taaaagaaag atttgacagc
540
aactgtatta caccaggaac tgaattcatg gacaatcttg ctaaatgcct tcgctattac
600
atagctgacg gtttaaataa tgaccctggg tggaaaaatt tgacagttat tttatctgat
660
gctagtgtc ctggtgaagg agaacataaa atcatggatt acattagaag gcaaagagcc
720
cagcctaacc atgacccaaa tactcatcat tgtttatgtg gagcagatgc tgatctcatt
780
atgcttgccc ttgccacaca tgaaccgaac tttaccatta ttagagaaga attcaaacca
840
aacaagccca aaccatgtgg tctttgtaat cagtttggac atgaggtcaa agattgtgaa
900
ggtttgccaa gagaaaagaa gggaaagcat gatgaacttg ccgatagtct tccttgtgca
960
gaaggagagt ttatcttcct tcggcttaat gttcttcgtg agtatttgga aagagaactc
1020
acaatggcca gcctaccatt cacatttgat gttgagagga gcattgatga ctgggttttc
1080
atgtgcttct ttgtgggaaa tgacttcctc cctcatttgc catcgttaga gattagggaa
1140
aatgcaattg accgttttgt taacatatac aaaaatgtgg tacacaaaac tgggggttac
1200
cttacagaaa gtggttatgt caatctgcaa agagtacaga tgatcatgtt agcagtttgt
1260
gaagttgagg atagcatttt taaaagaga aaggatgatg aggacagttt tagaagacga
1320
cagaaagaaa aaagaaagag aatgaagaga gatcaaccag ctttcactcc tagtggaata
1380
ttaactctc atgccttggg ttcaagaaat tcaccagggt ctcaagtagc cagtaatccg
1440
agacaagcag cctatgaaat gaggatgcag aataactcta gtccttcgat atctccta
1500
acgagtttca catctgatgg ctccccgtct ccattaggag gaattaagcg aaaagcagaa
1560
gacagtgaca gtgaacctga gccagaggat aatgtcaggt tatgggaagc tggctggaag
1620
cagcgttact acaagaacaa atttgatgtg gatgcagctg atgagaaatt ccgtcgga
1680
gttggtcagt cgtacgttga aggactttgc tgggttctta gatattatta ccagggtgt
1740
gttctctgga agtggtatta tccatttcat tatgcacat ttgcttcaga ctttgaaggc
1800
attgcagaca tgccatctga ttttgagaag ggtacgaaac cgtttaaacc actagaacaa
1860
cttatggggg tatttccagc tgcaagtggg aattttctac ctccatcatg gcggaagctc
1920
atgagtgtc ctgattctag tataattgac ttctatctg aagattttgc tattgatttg
1980
aatgggaaga aatatgcatg gcaaggtgtt gctctcttgc cattcgtgga tgagcgaagg
2040

gcagaagatt aggagctaga tcaagcaaga ctgggggctg caggtgtagg aagtgaatca
 240
 agatgacttc aaaagagaga ataaaaagtg ggcttatgaa gaattggtgg actcttcctg
 300
 gcaaattggg caagaaaagc agagatgggtg acaggaagaa aaagcaagca tagctgtcca
 360
 ctggctgggtt aagagcagct ctcaaaggtc gccagacaag catcccgtct tatgattcca
 420
 aagcat
 426

<210> 5010

<211> 119

<212> PRT

<213> Homo sapiens

<400> 5010

Met	Leu	Val	Trp	Arg	Pro	Leu	Arg	Ala	Ala	Leu	Asn	Gln	Pro	Val	Asp
1				5				10					15		
Ser	Tyr	Ala	Cys	Phe	Phe	Phe	Leu	Ser	Pro	Ser	Leu	Leu	Phe	Leu	Pro
			20				25				30				
Asn	Leu	Pro	Gly	Arg	Val	His	Gln	Phe	Phe	Ile	Ser	Pro	Leu	Phe	Ile
	35					40				45					
Leu	Ser	Phe	Glu	Val	Ile	Leu	Ile	His	Phe	Leu	His	Leu	Gln	Pro	Pro
	50					55				60					
Val	Leu	Leu	Asp	Leu	Ala	Pro	Asn	Leu	Leu	Leu	Pro	Phe	Gly	Thr	Glu
65				70				75					80		
Glu	Lys	Leu	Leu	Ser	Ser	Pro	Cys	Phe	Ala	Asp	Ile	Ser	Lys	Gly	Lys
			85				90						95		
Glu	Ser	Thr	Gly	Pro	Phe	Ile	Ser	Cys	Pro	Arg	Pro	Ser	Gln	Gly	Ala
			100				105						110		
Val	Ile	Met	Pro	Lys	Pro	Tyr									
			115												

<210> 5011

<211> 3431

<212> DNA

<213> Homo sapiens

<400> 5011

nccgcatgct cccgtatctt tggttacgct cgtcagccgg tcggccgccg cctccagccg
 60
 tgtgccgcta tgggagtcctt ggcgttcttc cgctggctca gccgcaagta cccgtccatc
 120
 atagtcaact gcgtggaaga gaagccaaaa gaatgcaatg gtgtaaagat tccagttgat
 180
 gccagtaaac ctaatccaaa tgatgtggag tttgataatc tgtatttgga tatgaatgga
 240
 atcatccatc cctgtactca tcctgaagac aaaccagcac caaaaaatga agatgaaatg
 300
 atggttgcaa tttttgagta cattgacaga cttttcagta ttgtaagacc aagaagactt
 360
 ctctacatgg caatagatgg agtggcacca cgtgtaaaaa tgaaccagca gcgttcaagg
 420

165 170 175
 Tyr Gly Gln Gly Phe Phe Glu Glu Glu Glu Gly Lys Glu Tyr Ile Tyr
 180 185 190
 Lys Glu Pro Lys Leu Thr Gly Leu Ser Glu Ile Ser Gln Arg Leu Leu
 195 200 205
 Lys Leu Tyr Ala Asp Lys Phe Gly Ala Asp Asn Val Lys Ile Ile Gln
 210 215 220
 Asp Ser Asn Lys Val Asn Pro Lys Asp Leu Asp Pro Lys Tyr Ala Tyr
 225 230 235 240
 Ile Gln Val Thr Tyr Val Thr Pro Phe Phe Glu Glu Lys Glu Ile Glu
 245 250 255
 Asp Arg Lys Thr Asp Phe Glu Met His His Asn Ile Asn Arg Phe Val
 260 265 270
 Phe Glu Thr Pro Phe Thr Leu Ser Gly Lys Lys His Gly Gly Val Ala
 275 280 285
 Glu Gln Cys Lys Arg Arg Thr Ile Leu Thr Thr Ser His Leu Phe Pro
 290 295 300
 Tyr Val Lys Lys Arg Ile Gln Val Ile Ser Gln Ser Ser Thr Glu Leu
 305 310 315 320
 Asn Pro Ile Glu Val Ala Ile Asp Glu Met Ser Lys Lys Val Ser Glu
 325 330 335
 Leu Asn Gln Leu Cys Thr Met Glu Glu Val Asp Met Ile Arg Leu Gln
 340 345 350
 Leu Lys Leu Gln Gly Ser Val Ser Val Lys Val Asn Ala Gly Pro Met
 355 360 365
 Ala Tyr Ala Arg Ala Phe Leu Glu Glu Thr Asn Ala Lys Lys Tyr Pro
 370 375 380
 Asp Asn Gln Val Lys Leu Leu Lys Glu Ile Phe Arg Gln Phe Ala Asp
 385 390 395 400
 Ala Cys Gly Gln Ala Leu Asp Val Asn Glu Arg Leu Ile Lys Glu Asp
 405 410 415
 Gln Leu Glu Tyr Gln Glu Glu Leu Arg Ser His Tyr Lys Asp Met Leu
 420 425 430
 Ser Glu Leu Ser Thr Val Met Asn Glu Gln Leu Cys Arg Gly Pro Cys
 435 440 445
 Leu Tyr Ser Phe Cys Ser Ser Val Ser Ser Ile Ser Leu Ser Thr Val
 450 455 460
 Ser Lys Ser Asp Tyr Gly Gln Gly Arg Pro Val Lys Ala Arg Ser Gly
 465 470 475 480
 Pro Asn Leu His Ser Ser Asn
 485

<210> 5009

<211> 426

<212> DNA

<213> Homo sapiens

<400> 5009

acgcgtgaag tgtttgtggc agtgctgggc acatgttaag tactcaataa ggtttaggca
 60
 ttattactgc cccctgtgaa ggtctggggc aggatatgaa agggcctgtg ctctccttcc
 120
 ccttgagat gtcagcaaag catggcgagg agagcagctt ctctctgtgc ccaaaggga
 180

ccaaacctgc actcgagtaa ttagcaaagc aactccggcc ctaccacagg tctccatctc
 1500
 atctagtgtc gaagtctgag ggctctgcag catcagaccc acctctaaga gaactttctg
 1560
 aatttgcagc taatctcggg gaagagaaag ataggtttaa tttatttgaa gttttcatgg
 1620
 tggttaattt tttgtttacc tcgctagctt cagaattttg ccaacctctg aatttgcaca
 1680
 ttttgtataa tttttttttc tttgagcagt gttgatcaag ccagggttgaa ttttggccat
 1740
 gaaattccag tgaatgtgta gctcaaatgc aaaccctaag tttgctgtca gttattgtat
 1800
 ggtcagtacc ccagtcctag tacacatatt ttaaagggtta aagtgaatgt ttttgtaaca
 1860
 ttttaagcata tttcagatgt aaataaaaaga ttgtaaaata tacgggtttt accaaattta
 1920
 aaagatcctt tttagttaat actatgacag tactaaaaat atatgaataa catttcagat
 1980
 accattatat taaaatattt gtgtatgtgt acaaaagcgt tgataaatac taatctttaa
 2040
 agtttgtgga gttcctttat ttgtaataata tgtgctctta aaagcaatgg gatgtgaaat
 2100
 tatgaaagta ttttattggt catagaaata aaaaacacag ttactttgca aaaaaaaaaa
 2160
 aaaaa
 2165

<210> 5008

<211> 487

<212> PRT

<213> Homo sapiens

<400> 5008

Leu	Asn	Ser	Ala	Arg	Lys	Ser	Ser	Phe	Phe	Arg	Ile	Pro	Val	Gln	Pro
1			5					10					15		
Gly	Asn	Ser	Tyr	Ala	Ser	Thr	Pro	Glu	Leu	Arg	Arg	Thr	Arg	Leu	Glu
	20							25				30			
Ser	Met	Ala	Lys	Ile	His	Ala	Arg	Asn	Gly	Asp	Leu	Ser	Glu	Ala	Ala
	35						40				45				
Met	Cys	Tyr	Ile	His	Ile	Ala	Ala	Leu	Ile	Ala	Glu	Tyr	Leu	Lys	Arg
	50					55				60					
Lys	Gly	Met	Phe	Ser	Met	Gly	Trp	Pro	Ala	Val	Leu	Ser	Ile	Thr	Pro
65				70				75					80		
Asn	Ile	Lys	Glu	Glu	Gly	Ala	Met	Lys	Glu	Asp	Ser	Gly	Met	Gln	Asp
		85						90					95		
Thr	Pro	Tyr	Asn	Glu	Asn	Ile	Leu	Val	Glu	Gln	Leu	Tyr	Met	Cys	Val
	100							105				110			
Glu	Phe	Leu	Trp	Lys	Ser	Glu	Arg	Tyr	Glu	Xaa	Ser	Leu	Leu	Met	Ser
	115					120					125				
Thr	Ser	Pro	Ser	Leu	Leu	Ser	Leu	Arg	Asn	Asn	Glu	Thr	Ser	Lys	Asn
	130					135					140				
Ser	Asp	Leu	Tyr	Tyr	Asp	Ile	His	Arg	Ser	Tyr	Leu	Lys	Val	Ala	Glu
145				150				155					160		
Val	Val	Asn	Ser	Glu	Ala	Ala	Val	Trp	Ser	Leu	Leu	Ser	Cys	Gly	Ile

<210> 5007

<211> 2165

<212> DNA

<213> Homo sapiens

<400> 5007

ctgaattcgg ctagaaaatc aagctttttc cgaatcccag tacagccggg caattcctac
60
gcaagcactc ctgaactacg caggacccgg ctggaaagta tggccaagat tcatgccaga
120
aacggagatt tatctgaggc tgccatgtgt tacatccata ttgctgccct cattgcagag
180
tatctgaaaa gaaagggcat gttctctatg ggatggccag ctgttttgag cattacacca
240
aacattaagg aagaaggagc gatgaaagag gattctggaa tgcaagatac accatacaat
300
gagaatatcc tgggtggagca gctatacatg tgtgtggagt ttctctggaa gtctgagcga
360
tatgaannct cattgctgat gtcaacaagc ccatcattgc tgtctttgag aaacaacgag
420
acttcaaaaa attcagatct ctactacgac attcatcggc catatctgaa agtggcagag
480
gtggtgaatt cggaagcggc tgtttggtcg ctactatcgt gtggcattta tgggcagggc
540
ttttttgaag aagaagaagg taaagagtat atttataaag agcctaagct gacaggtctg
600
tccgagatth cccaagatt actcaagctc tatgcagata aatttgagc agacaatgtg
660
aagataatcc aggattccaa caaggtaaac cccaaggatt tggaccccaa atatgcctac
720
atccaggtga cctatgtgac gccgttcttt gaggaaaagg aaatcgaaga ccggaagaca
780
gatttcgaaa tgcaccacaa catcaaccgc tttgtcttcg agacaccctt cacgctgtcg
840
ggcaagaagc acggtggggg ggaggagcag tgcaagcggc ggacgatcct gacaacgagt
900
cacctgttcc cctacgtgaa gaagagaata caagtaatta gccaatcgag cacagaactg
960
aatccaattg aagtggcaat tgacgagatg tccaagaagg tttctgagct taatcagctt
1020
tgcacaatgg aagaagtgga catgatcaga ctgcagctca aactgcaagg aagtgtcagc
1080
gtgaagggtta atgctggggc aatggcctat gcacgagctt ttcttgaaga aaccaatgca
1140
aagaagtacc ctgacaacca agtaaagctt ttgaaggaga tcttcaggca atttgcagat
1200
gcatgtgggc aggcccttga cgtgaatgag cgcctcatca aagaggacca gctggagtac
1260
caggaagaac tgagggtcca ctacaaggac atgctcagcg aactctccac agtcatgaat
1320
gagcagctct gtcgagggtc gtgtttatac agcttctgtt cctctgtgtc tagtatttcc
1380
ctcagtactg taagcaaaag tgattacggg cagggacgac ctgtcaaagc gcggagtggg
1440

ggctccggtc acgtcacggt atttggactg agcaacaaat ttgaatctga attcccttct
 480
 tcattaactg gaaaagtagc tcctgaagaa tttaaagcca gcatcaacag agttaacagt
 540
 tgtcttaaga agaaccctcc tgtaaatgta cgttggctac tttgtggctg cctttgttgc
 600
 tgctgcacat taggttgcag tatgtggcca gttatttggc tcagtaaaag aacacgaaga
 660
 tcgattgaga agttattaga atgggaaaac aatagggttat accacaagct gtgcttgcat
 720
 tggagactga gcaaaaggaa atgtgaaacg aataacatga tggaatatgt catcctcata
 780
 gaatttttac caaagacacc gatttttcca ccagattagc atttacttta tttatagaga
 840
 ctttccaagt atgttgtctt tccaatggtg ccttgcttgg tgctctctcg gtggtgacat
 900
 aacattgggt ctacagaatc gtgtgggtgt ttttttgttt ttgttttttt ttttttttta
 960
 aataaccgca tgttctaagt gtgcattttt gtcaatcttt gcaacagtta tttcatacag
 1020
 atgtttaata ctttaagttat tgtgctcttt tctgttatgt attctgattt tcaaggatta
 1080
 cttttttgta ttatcaaaaa aatacatttg aacttagcat
 1120

<210> 5006

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5006

Met	Ala	Asp	Phe	Asp	Glu	Ile	Tyr	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Arg
1				5				10					15		
Ala	Leu	Glu	Glu	Gln	Leu	Leu	Lys	Tyr	Ser	Pro	Asp	Pro	Val	Val	Val
		20					25					30			
Arg	Gly	Ser	Gly	His	Val	Thr	Val	Phe	Gly	Leu	Ser	Asn	Lys	Phe	Glu
		35				40						45			
Ser	Glu	Phe	Pro	Ser	Ser	Leu	Thr	Gly	Lys	Val	Ala	Pro	Glu	Glu	Phe
		50				55					60				
Lys	Ala	Ser	Ile	Asn	Arg	Val	Asn	Ser	Cys	Leu	Lys	Lys	Asn	Leu	Pro
65				70					75				80		
Val	Asn	Val	Arg	Trp	Leu	Leu	Cys	Gly	Cys	Leu	Cys	Cys	Cys	Cys	Thr
			85					90					95		
Leu	Gly	Cys	Ser	Met	Trp	Pro	Val	Ile	Cys	Leu	Ser	Lys	Arg	Thr	Arg
			100					105					110		
Arg	Ser	Ile	Glu	Lys	Leu	Leu	Glu	Trp	Glu	Asn	Asn	Arg	Leu	Tyr	His
		115					120					125			
Lys	Leu	Cys	Leu	His	Trp	Arg	Leu	Ser	Lys	Arg	Lys	Cys	Glu	Thr	Asn
		130				135					140				
Asn	Met	Met	Glu	Tyr	Val	Ile	Leu	Ile	Glu	Phe	Leu	Pro	Lys	Thr	Pro
145					150				155					160	
Ile	Phe	Arg	Pro	Asp											
				165											

385 390 395 400
 Ser Thr Ser Thr Val His Asn Ile Ile Val Gly Lys Leu Trp Ile Asp
 405 410 415
 Gln Ser Gly Asp Ile Glu Ile Val Asn His Lys Thr Asn Asp Arg Cys
 420 425 430
 Gln Leu Lys Phe Leu Pro Tyr Ser Tyr Phe Ser Lys Glu Ala Ala Arg
 435 440 445
 Lys Val Thr Gly Val Val Ser Asp Ser Gln Gly Lys Ala His Tyr Val
 450 455 460
 Leu Ser Gly Ser Trp Asp Glu Gln Met Glu Cys Ser Lys Val Met His
 465 470 475 480
 Ser Ser Pro Ser Ser Pro Ser Ser Asp Gly Lys Gln Lys Thr Val Tyr
 485 490 495
 Gln Thr Leu Ser Ala Lys Leu Leu Trp Lys Lys Tyr Pro Leu Pro Glu
 500 505 510
 Asn Ala Glu Asn Met Tyr Tyr Phe Ser Glu Leu Ala Leu Thr Leu Asn
 515 520 525
 Glu His Glu Glu Gly Val Ala Pro Thr Asp Ser Arg Leu Arg Pro Asp
 530 535 540
 Gln Arg Leu Met Glu Lys Gly Arg Trp Asp Glu Ala Asn Thr Glu Lys
 545 550 555 560
 Gln Arg Leu Glu Glu Lys Gln Arg Leu Ser Arg Arg Arg Arg Leu Glu
 565 570 575
 Ala Cys Gly Pro Gly Ser Ser Cys Ser Ser Glu Glu Gly Glu Ala Gly
 580 585 590
 Arg Glu Gly Arg Pro Gly Gly Glu Glu Arg Gly Ala Arg Val Gly Val
 595 600 605
 Pro Gln Gly Arg Ile Pro Gly Glu Gln Ala Thr Ser Pro Pro Thr Ser
 610 615 620
 Pro Leu Cys Leu Pro Ser Arg Glu Gly Gly Gly Cys Leu His Ala Thr
 625 630 635 640
 Val Val

<210> 5005

<211> 1120

<212> DNA

<213> Homo sapiens

<400> 5005

ntcgggctgt tgctgtggtt tcctgagttg ctgctgctgc ggcggcggca gcggcgctctg
 60
 tgcttgtgga ggtgtcggcc tctgggcgga tgttgacatt gtgtgttgtt tattgctgat
 120
 ggtaatggcg gcggcggtgg cggcgacggt ccagacccca tcccctctgt agccggagcc
 180
 gagacagccg acagcgaact ccgcggcctc ggagccggcg gcagcggcga ctcccctcag
 240
 cctcgcgcgc ctgcgccgcc ggtaccccg cgccaacccc gggagtcagg ccctttgggc
 300
 aggggagctc ggaggctcag gatggcgcat ttcgacgaaa tctatgagga agaggaggac
 360
 gaggagcggg ccctggagga gcagctgctc aagtactcgc cggaccgggt ggtcgtccgc
 420

<211> 642

<212> PRT

<213> Homo sapiens

<400> 5004

```

Ser Ser Thr Asp Asp Ser Gly Asp Asp Asp Glu Ala Thr Thr Pro Ala
 1           5           10           15
Asp Lys Ser Glu Leu His His Thr Leu Lys Asn Leu Ser Leu Lys Leu
 20           25           30
Asp Asp Leu Ser Thr Cys Asn Asp Leu Ile Ala Lys His Gly Ala Ala
 35           40           45
Leu Gln Arg Ser Leu Asn Glu Leu Asp Gly Leu Lys Ile Pro Ser Glu
 50           55           60
Ser Gly Glu Lys Leu Lys Val Val Asn Glu Arg Ala Thr Leu Phe Arg
 65           70           75           80
Ile Thr Ser Asn Ala Met Ile Asn Ala Cys Arg Asp Phe Leu Glu Leu
 85           90           95
Ala Glu Ile His Ser Arg Lys Trp Gln Arg Ala Leu Gln Tyr Glu Gln
 100          105          110
Glu Gln Arg Val His Leu Glu Glu Thr Ile Glu Gln Leu Ala Lys Gln
 115          120          125
His Asn Ser Leu Glu Arg Ala Phe His Ser Ala Pro Gly Arg Pro Ala
 130          135          140
Asn Pro Ser Lys Ser Phe Ile Glu Gly Ser Leu Leu Thr Pro Lys Gly
 145          150          155          160
Glu Asp Ser Glu Glu Asp Glu Asp Thr Glu Tyr Phe Asp Ala Met Glu
 165          170          175
Asp Ser Thr Ser Phe Ile Thr Val Ile Thr Glu Ala Lys Glu Asp Ser
 180          185          190
Arg Lys Ala Glu Gly Ser Thr Gly Thr Ser Ser Val Asp Trp Ser Ser
 195          200          205
Ala Asp Asn Val Leu Asp Gly Ala Ser Leu Val Pro Lys Gly Ser Ser
 210          215          220
Lys Val Lys Arg Arg Val Arg Ile Pro Asn Lys Pro Asn Tyr Ser Leu
 225          230          235          240
Asn Leu Trp Ser Ile Met Lys Asn Cys Ile Gly Arg Glu Leu Ser Arg
 245          250          255
Ile Pro Met Pro Val Asn Phe Asn Glu Pro Leu Ser Met Leu Gln Arg
 260          265          270
Leu Thr Glu Asp Leu Glu Tyr His His Leu Leu Asp Lys Ala Val His
 275          280          285
Cys Thr Ser Ser Val Glu Gln Met Cys Leu Val Ala Ala Phe Ser Val
 290          295          300
Ser Ser Tyr Ser Thr Thr Val His Arg Ile Ala Lys Pro Phe Asn Pro
 305          310          315          320
Met Leu Gly Glu Thr Phe Glu Leu Asp Arg Leu Asp Asp Met Gly Leu
 325          330          335
Arg Ser Leu Cys Glu Gln Val Ser His His Pro Pro Ser Ala Ala His
 340          345          350
Tyr Val Phe Ser Lys His Gly Trp Ser Leu Trp Gln Glu Ile Thr Ile
 355          360          365
Ser Ser Lys Phe Arg Gly Lys Tyr Ile Ser Ile Met Pro Leu Gly Ala
 370          375          380
Ile His Leu Glu Phe Gln Ala Ser Gly Asn His Tyr Val Trp Arg Lys

```

ccccaacatc ttctgagcgc cacccttgca acaaatacag gcgcctgcac agcctggccc
2280
acctgttcat taatgcactc aatttagtac tgaatggtct ttctcccagc ccattcccag
2340
cccttctat ttcttttctt attttttttt ctccccacac tttcttgga ctcccactt
2400
ggaaggagga agggctgacc tgggttctct ccagcccca ggtgcgccg gtcacccgtg
2460
cccttcatt atggacctgg gccctaccgg aaccctgcc ccagttacca caactcaggc
2520
cggctggccc gggccatggg ctgcgcaa at caccagcccc caaccaggg aggaactggc
2580
ccctcctagg gagcctcttc gactttttta gaaaaatgat ctccatttct ttccagccat
2640
gatgtttagt aaatatTTTT agtaccgcac ttagcagaca gctttccaag tgtgctttct
2700
tgccacaaaa gtgtcctggc aagagcccct tatttttaag acatcaggaa gccagaccgc
2760
tttgagttgg gagaattttg tagctcaaca tatcaagtcc tcgatggtat ctgagctgcc
2820
cacaccccca cctgccaagg cccacagag cccaaaacag aagggggctg cccagccca
2880
gcagagcaca gagtttctgg agctcccatc cacagatgca ggagggggta ctgatggtaa
2940
cccccatgtg gatttgaggg cagcagtcct tggcctcacc ctagccagcc tgggtggctc
3000
cctagcccca agaggccagg aagggctgga aggcagggcc tgcaggtgct ccccgccctg
3060
agaccaggc cccaaatcag caataatgaa caaaccttg gccagcctg ggctggtgac
3120
ctgggcacca gagacctgc atccctctc atcctaggag gccctaggg gtgccccatc
3180
tcagtgtccc ctgaactctt tatttgcta atttatatat atatatatga gatataaaa
3240
tatataaaa atagctatTT tgcttaaatt tctacagtat gtaaaagtga aaaaatgatg
3300
aagacgggtg cacctgtctg agtttgccc tcatgtgagc tgtgcccttc cctctctca
3360
tgcccccttc cagcggttc tgccaaccat ggggggctgg accaccatgg ccaactgacc
3420
agccctcag aatcccacac tccaatcctt tccatttcag tttagtcta aaagttcatc
3480
acagggtctt tctttctact ccaggactgg ttttgTTTT atatatataa aaaaaaaag
3540
tgaaaacacc aatgtgtgaa atgccttaca atgcccactg gagaggcggg gcggggtggg
3600
gcaggatggc ccactaggg ctctacaga gctgtggaat gtacctctcc ccaactgt
3660
tttgtagcg agcacctttt gaccagtaat aaaaaacctt ggctttggag tttccactg
3720
aaaaaaaaa
3729

<210> 5004

cgggccttcc acagtgcccc tggccggccg gccaaaccct ccaagagctt cattgagggg
660
agcctcttga ctcccaaagg agaggacagt gaggaagatg aagataaccga gtactttgat
720
gccatggaag actccacatc cttcatcacc gtgatcaccg aggccaagga agacagcaga
780
aaagctgaag gtagcaccgg gacaagttcc gtggactgga gctcagcaga caatgtacta
840
gatggtgcct cgctcgtgcc caagggttca tccaaagtca agaggcgagt ccgcattccc
900
aacaagccca actacagcct taacctctgg agcatcatga agaactgcat cggccgggag
960
ctctccagga tccccatgcc ggtgaacttc aatgagcccc tgtccatgct ccagcggctg
1020
acagaggacc tggagtacca ccacctgctg gacaaggcag tgcactgcac cagctcagt
1080
gagcagatgt gcctggtggc cgccttctct gtgtcctcct actccaccac agtgcaccgc
1140
atcgccaagc ctttcaaccc catgctgggg gagaccttcg agctggaccg cctcgacgac
1200
atgggcctgc gctccctctg tgagcaggtg agccaccacc cccctcagc tgcgcactac
1260
gtgttctcca agcatggctg gagcctctgg caggagatca ccatctccag caagttccgg
1320
ggaaaataca tctccatcat gccgctaggt gccatccact tagaattcca ggccagtggg
1380
aatcactacg tgtggaggaa gagcacctca actgttcaca acatcatcgt gggcaagctc
1440
tggatcgacc agtcagggga catcgagatt gtgaaccata agaccaatga ccggtgccag
1500
ctgaagttcc tgccctacag ctacttctcc aaagaggcag cccggaaggt gacaggagt
1560
gtgagtgaca gccagggcaa ggcccattac gtgctgtccg gctcgtggga tgaacaaatg
1620
gagtgtcca aggtcatgca tagcagtccc agcagcccca gctctgacgg gaagcagaag
1680
acagtgtacc agaccctgtc agccaagctg ctgtggaaga agtaccgct gccggagaac
1740
gcbgagaaca tgtactactt ctcagagctg gccctgacct tcaacgagca cgaggagggc
1800
gtagcgccaa ccgacagccg cctgcggccc gaccagcggc tgatggagaa gggccgttg
1860
gacgaggcca ataccgagaa gcagcggctg gaggagaagc agcgctgtc gggcgccgg
1920
cggctggagg cctgcggggc gggcagcagc tgcagctcgg aggaaggtga ggccgggagg
1980
gaagggcgcc ccggagggga ggaaaggggt gcccgggtgg gggtgccgca gggacggatt
2040
ccgggggagc aggccacaag cccaccacc agccactgt gcctgcccag cagagaagga
2100
ggcggtatgcc tacacgccac tgtggtttga gaagaggctg gatccgctga ctggggagat
2160
ggcctgtgtg tacaagggcg gctactggga ggccaaggag aagcaagact ggcatatgtg
2220

115	120	125
Asn Ala Glu Asn Cys Val Arg Leu Leu Ser Phe Ala Asp Leu Phe Ser		
130	135	140
Cys Glu Glu Leu Lys Gln Ser Ala Lys Arg Met Val Glu His Lys Phe		
145	150	155
Thr Ala Val Tyr His Gln Asp Ala Phe Met Gln Leu Leu His Asp Leu		
165	170	175
Leu Ile Asp Ile Leu Ser Ser Asp Asn Leu Asn Val Glu Lys Glu Glu		
180	185	190
Thr Val Arg Glu Ala Ala Met Leu Trp Leu Glu Tyr Asn Thr Glu Ser		
195	200	205
Arg Ser Gln Tyr Leu Ser Ser Val Leu Ser Gln Ile Arg Ile Asp Ala		
210	215	220
Leu Ser Glu Val Thr Gln Arg Ala Trp Phe Gln Gly Leu Pro Pro Asn		
225	230	235
Asp Lys Ser Val Val Val Gln Gly Leu Tyr Lys Ser Met Pro Lys Phe		
245	250	255
Phe Lys Pro Arg Leu Gly Met Thr Lys Glu Glu Met Met Ile Phe Ile		
260	265	270
Glu Ala Ser Ser Glu Asn Pro Cys Ser Leu Tyr Ser Ser Val Cys Tyr		
275	280	285
Ser Pro Gln Ala Glu Lys Val Tyr Lys Leu Cys Ser Pro Pro Ala Asp		
290	295	300
Leu His Lys Val Gly Thr Val Val Thr Pro Asp Asn Asp Ile Tyr Ile		
305	310	315
Ala Gly Gly Gln Val Pro Leu Xaa Lys His Lys Asn Lys Ser Gln		
325	330	335

<210> 5003

<211> 3729

<212> DNA

<213> Homo sapiens

<400> 5003

```

ncagggtgggc ccttgcccac cccaccctgg gaaggctggg ccaggatggg gcaggcacct
60
caccggggcc aggaacagga acgggcacca tctcggggac tgatgttttt tgaatggcgc
120
tatccaccct gccctgctcg gcctggctgt gcaggcctct tgggtaccacg tctgttcgta
180
atgaccgtaa caactctatt ttcttcaca gatgactctg gggacgacga cgaggctacc
240
accccgccg acaagagcga gctgcaccac accctgaaga atctttccct gaagttagat
300
gacctcagca cgtgcaatga cctcatcgcc aagcatggcg ctgcctcca gcgtccctg
360
aatgagctgg acggcctcaa gatcccatct gagagtgggg agaagctgaa ggtggtgaat
420
gagcggggcca cctcttccg catcacatcc aatgctatga tcaacgcctg cagggacttc
480
ttggaactag cagagataca cagtcggaaa tggcagcggg cactgcagta tgagcaggag
540
cagcgcgtgc acttgaggga aaccattgag cagctggcga agcagcaca cagcctcgag
600

```

agttcaaaaa gttcatttat aaaagtagtt tctgttccct agtgtgatgt atcacaaatt
 2580
 gtgctgaggt tatttttagta tgtgtgtttc attcccgtgc ttctgttctg aagtcctgga
 2640
 atacagtttt cagtgttaatt aattcaactg cacttaacac taatgtccgt gttggtatag
 2700
 aaatgtctaa atcctatact ctagttagg aagatcttcc ataattttat ggtattacac
 2760
 agggaaagct atgactgcag gatcagtcta actatactat taggtgcatg tattctcttt
 2820
 tcactaactt atacttgtct atctagaata caggtcttcc agtcagctgg tcatttacca
 2880
 ggtgtggact taagttgctg ggcttgagc aagaattgcc agccactcat tgtgcgggctc
 2940
 tgcgtggagc tttaatcaga aaaagcctcc actttctgta ttatgttaac attggctcat
 3000
 gcatataact atctgctgct gatgtagttc tccatcttca agatttagag tgggttaacc
 3060
 aggtcattac atcttaattt aataacaagc attactgtag agtgattgtg tatagatctg
 3120
 ttagctgtca ggggtgtgtt tttttaacct gttgtgtgctg tgtgggggtt aggattagta
 3180
 aggtgaactg ttcaggaatt ctctgcacta gctgtgcaga agagcagata actagcgctg
 3240
 ctctggcatt aatcccagga accactagca gtagtggggc gccgccaatc taacatgagc
 3300
 acaggtgctt catgacaaac attactagca tgttcaactg caccatgttc tggcactgta
 3360
 ttttgaatga cattaattta ttaaataaat tgtatatatt caaaaaaaaa aaaaaaaaaa
 3420
 aaaaaaa
 3427

<210> 5002

<211> 335

<212> PRT

<213> Homo sapiens

<400> 5002

Met	Ser	Thr	Gln	Asp	Glu	Arg	Gln	Ile	Asn	Thr	Glu	Tyr	Ala	Val	Ser
1				5					10					15	
Leu	Leu	Glu	Gln	Leu	Lys	Leu	Phe	Tyr	Glu	Gln	Gln	Leu	Phe	Thr	Asp
		20						25					30		
Ile	Val	Leu	Ile	Val	Glu	Gly	Thr	Glu	Phe	Pro	Cys	His	Lys	Met	Val
		35					40					45			
Leu	Ala	Thr	Cys	Ser	Ser	Tyr	Phe	Arg	Ala	Met	Phe	Met	Ser	Gly	Leu
	50					55				60					
Ser	Glu	Ser	Lys	Gln	Thr	His	Val	His	Leu	Arg	Asn	Val	Asp	Ala	Ala
65					70					75				80	
Thr	Leu	Gln	Ile	Ile	Ile	Thr	Tyr	Ala	Tyr	Thr	Gly	Asn	Leu	Ala	Met
			85					90					95		
Asn	Asp	Ser	Thr	Val	Glu	Gln	Leu	Tyr	Glu	Thr	Ala	Cys	Phe	Leu	Gln
			100					105					110		
Val	Glu	Asp	Val	Leu	Gln	Arg	Cys	Arg	Glu	Tyr	Leu	Ile	Lys	Lys	Ile

agtagtgaca atttaaatgt agaaaaggaa gaaaccgttc gagaagctgc tatgctgtgg
960
ctagagtata acacagaatc acgatcccag tatttgtctt ctgttcttag ccaaatacaga
1020
attgatgcac ttccagaagt aacacagaga gcttggtttc aaggctctgcc acccaatgat
1080
aagtcagtgg tgggtcaagg tctgtataag tccatgccca agtttttcaa accaagactt
1140
gggatgacta aagaggaaat gatgattttc attgaagcat cttcagaaaa tccttgtagt
1200
ctttactctt ctgtctgtta cagcccccaa gcagaaaaag tttacaagtt atgtagccca
1260
ccagctgatt tgcataaggt tgggaccgtt gtaactcctg ataataatct ctacatagca
1320
gggggtcaag ttcctctgna aaaacacaaa aacaaatcac agtaaaacaa gcaaacttca
1380
gactgccttc agaactgtga attgctttta ttggtttgat gcacagcaaa atacctgggt
1440
tccaaagacc ccaatgcttt ttgtccgcat aaagccatct ttggtttgct gtgaaggcta
1500
tatctatgca attggaggag atagcgtagg tggagaactt aatcggagga ccgtagaaag
1560
atacgacact gagaaagatg agtggacgat ggtaagccct ttacctgtg ctgggcaatg
1620
gagtgcagca gttgtggttc atgactgcat ttatgtgatg aactgaacc tcatgtactg
1680
ttattttcca aggtctgact catgggtaga aatggccatg agacagacta gtaggtcctt
1740
tgcttcagct gcagcttttg gtgataaaat tttctatatt ggagggttg atattgctac
1800
caattccggc ataagactcc cctctggcac tgtagatggg tcttcagtaa ctgtggaaat
1860
ttatgatgtg aataaaaatg agtggaaaat ggcagccaac atccctgcta agaggctac
1920
tgacctgtgt gttagagctg ttgtgatctc aaattctcta tgtgtgttta tgcgagaaac
1980
ccacttaaata gagcgagcta aatacgtcac ctaccaatat gacctggaac ttgaccggtg
2040
gtctctgagg cagcatatat ctgaacgtgt actgtgggac ttggggagag attttcgatg
2100
cactgtgggg aaactctatc catcctgcct tgaagagtct ccatggaaac caccaactta
2160
tcttttttca acggatggga cagaagagtt tgaactggat ggagaaatgg ttgcactacc
2220
acctgtatag tggggaagtt caggaggtgc acgcctgagt tatgtgcttt gtcattttct
2280
ttgctaaaca aaagaggcta tgaagaact aaatatgagt acataaaatt ctatctttga
2340
taaattttat ttttatgccc tacttaatat ttgcatcagt ataatatata tcagtgagtc
2400
ttacagaaag atatgcttcc ataatatgaa atagattatt caataattga gaaactttat
2460
gtgtaatcat gagagtataa gaatctggat tatctaact tgtagccct gtgtatgtac
2520


```
<210> 5001
<211> 3427
<212> DNA
<213> Homo sapiens
```

4174

aaatgggttag cctgagatgc tggaaagcttc aaaggattgg tggagactat gcatgggttaa
 1020
 ggccatcccg aacttttttaa agtatttatg aagcatcaga gacttatttt ccctgtaata
 1080
 gaatgcaaaa tcagggaaaa tgggttgctt tgtgtctcaa gtattgtctt tatttttgag
 1140
 actattttca tacagttgtc atacacaagg cgcataatata tatttgtgaa ttaaaatctg
 1200
 tagctgagtc tacattgtta tgagtcacca ttttcacaca acatcatgaa tcttcactgt
 1260
 tagtactttc atatagaatt cgggtgaagg aaagattgat ttttgtgtag atgtttaata
 1320
 taactttaca actatatctc attgaaaata aagtcattgg ggatttttac ctctaatttg
 1380
 gatggaaagc acaagaagcc acacattcat taatatgcaa caaatgttgt atttatgtta
 1440
 ctgaatatct ctatggatta aaatagaaaa agtttaattg attttttctt ttaaatttta
 1500
 ataacagggt caccagctgg tagaaaatag agacacatga tgatttgcac tgaataaatt
 1560
 tctgtgtgta tgtgtgtgtg ttgttttggt ttataaaga aaagtgtgtt tgtacccatg
 1620
 agttcagcat
 1630

<210> 5000

<211> 307

<212> PRT

<213> Homo sapiens

<400> 5000

Ala	Ala	Ala	Ala	Asp	Gly	Gly	Thr	Val	Asp	Leu	Arg	Glu	Met	Leu	Ala
1				5					10					15	
Val	Ser	Val	Leu	Ala	Ala	Val	Arg	Gly	Gly	Asp	Glu	Val	Arg	Arg	Val
			20					25					30		
Arg	Glu	Ser	Asn	Val	Leu	His	Glu	Lys	Ser	Lys	Gly	Lys	Thr	Arg	Glu
		35					40					45			
Gly	Ala	Glu	Asp	Lys	Met	Thr	Ser	Gly	Asp	Val	Leu	Ser	Asn	Arg	Lys
	50					55					60				
Met	Phe	Tyr	Leu	Leu	Lys	Thr	Ala	Phe	Pro	Ser	Val	Gln	Ile	Asn	Thr
65					70				75					80	
Glu	Glu	His	Val	Asp	Ala	Ala	Asp	Gln	Glu	Val	Ile	Leu	Trp	Asp	His
			85					90						95	
Lys	Ile	Pro	Glu	Asp	Ile	Leu	Lys	Glu	Val	Thr	Thr	Pro	Lys	Glu	Val
			100					105					110		
Pro	Ala	Glu	Ser	Val	Thr	Val	Trp	Ile	Asp	Pro	Leu	Asp	Ala	Thr	Gln
		115					120					125			
Glu	Tyr	Thr	Glu	Asp	Leu	Arg	Lys	Tyr	Val	Thr	Thr	Met	Val	Cys	Val
	130						135					140			
Ala	Val	Asn	Gly	Lys	Pro	Met	Leu	Gly	Val	Ile	His	Lys	Pro	Phe	Ser
145				150					155					160	
Glu	Tyr	Thr	Ala	Trp	Ala	Met	Val	Asp	Gly	Gly	Ser	Asn	Val	Lys	Ala
				165				170						175	
Arg	Ser	Ser	Tyr	Asn	Glu	Lys	Thr	Pro	Arg	Ile	Val	Val	Ser	Arg	Ser

```
<210> 4999
<211> 1630
<212> DNA
<213> Homo sapiens
```

4172

tgtgtcaaag aagtcagaa cgtactcttg gcagaaagga ttaataacag gaaattaagt
 1860
 gcttttaaaa atgtgggaaa ggccaggc
 1888

<210> 4998
 <211> 464
 <212> PRT
 <213> Homo sapiens

<400> 4998
 Met Ser Ser Arg Thr Val Leu Ala Pro Gly Asn Asp Arg Asn Ser Asp
 1 5 10 15
 Thr His Gly Thr Leu Gly Ser Gly Arg Ser Ser Asp Lys Gly Pro Ser
 20 25 30
 Trp Ser Ser Arg Ser Leu Gly Ala Arg Cys Arg Asn Ser Ile Ala Ser
 35 40 45
 Cys Pro Glu Glu Gln Pro His Val Gly Asn Tyr Arg Leu Leu Arg Thr
 50 55 60
 Ile Gly Lys Gly Asn Phe Ala Lys Val Lys Leu Ala Arg His Ile Leu
 65 70 75 80
 Thr Gly Arg Glu Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asn
 85 90 95
 Pro Ser Ser Leu Gln Lys Leu Phe Arg Glu Val Arg Ile Met Lys Gly
 100 105 110
 Leu Asn His Pro Asn Ile Val Lys Leu Phe Glu Val Ile Glu Thr Glu
 115 120 125
 Lys Thr Leu Tyr Leu Val Met Glu Tyr Ala Ser Ala Gly Glu Pro Pro
 130 135 140
 Thr Leu Ser Ala Leu Pro Leu Cys His Leu Pro Leu Pro Leu His Leu
 145 150 155 160
 Thr Leu Thr Pro Leu Gly Leu Cys Pro Ala Gly Glu Val Phe Asp Tyr
 165 170 175
 Leu Val Ser His Gly Arg Met Lys Glu Lys Glu Ala Arg Ala Lys Phe
 180 185 190
 Arg Gln Ile Val Ser Ala Val His Tyr Cys His Gln Lys Asn Ile Val
 195 200 205
 His Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala Glu Ala Asn
 210 215 220
 Ile Lys Ile Ala Asp Phe Gly Phe Ser Asn Glu Phe Thr Leu Gly Ser
 225 230 235 240
 Lys Leu Asp Thr Phe Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu
 245 250 255
 Phe Gln Gly Lys Lys Tyr Asp Gly Pro Glu Val Asp Ile Trp Ser Leu
 260 265 270
 Gly Val Ile Leu Tyr Thr Leu Val Ser Gly Ser Leu Pro Phe Asp Gly
 275 280 285
 His Asn Leu Lys Glu Leu Arg Glu Arg Val Leu Lys Gly Lys Tyr Arg
 290 295 300
 Val Pro Phe Tyr Met Ser Thr Asp Cys Glu Ser Ile Leu Arg Arg Phe
 305 310 315 320
 Leu Val Leu Asn Pro Ala Lys Arg Cys Thr Leu Glu Gln Ile Met Lys
 325 330 335
 Asp Lys Trp Ile Asn Ile Gly Tyr Glu Gly Glu Glu Leu Lys Pro Tyr

gccccccggg acccggagaa gatgtcttcg cggacggtgc tggccccggg caacgatcgg
240
aactcggaca cgcattggcac cttgggcagt ggccgctcct cggacaaaagg cccgtcctgg
300
tccagccgct cactgggtgc ccgttgccgg aactccatcg cctcctgtcc cgaggagcag
360
ccccacgtgg gcaactaccg cctgctgagg accattggga agggcaactt tgccaaagtc
420
aagctggctc ggcacatcct cactggctcg gaggttgcca tcaagattat cgacaaaacc
480
cagctgaatc ccagcagcct gcagaagctg ttccgagaag tccgcatcat gaagggccta
540
aaccacccca acatcgtgaa gctctttgag gtgattgaga ctgagaagac gctgtacctg
600
gtgatggagt acgcaagtgc tggtagccg cccaccctct ccgccctgcc cctgtgccac
660
ctccccctgc cgctgcacct gaccctgacc ccgctcggcc tctgcctgc aggagaagtg
720
tttgactacc tegtgtcgca tggccgcatg aaggagaagg aagctcgagc caagttccga
780
cagattgttt cggctgtgca ctattgtcac cagaaaaata ttgtacacag ggacctgaag
840
gctgagaacc tcttgctgga tgccgaggcc aacatcaaga ttgctgactt tggcttcagc
900
aacgagttca cgctgggac gaagctggac acgttctgcg ggagcccccc atatgccgcc
960
ccggagctgt ttcagggcaa gaagtacgac gggccggagg tggacatctg gacctggga
1020
gtcatcctgt acaccctcgt cagcggctcc ctgcccttcg acgggcacaa cctcaaggag
1080
ctgcccggagc gactactcaa aggaagtac cgggtccctt tctacatgtc aacagactgt
1140
gagagcatcc tgccgagatt tttggtgctg aaccagcta aacgtgtac tctcgagcaa
1200
atcatgaaag acaaatggat caacatcggc tatgaggggtg aggagttgaa gccatacaca
1260
gagcccagg aggacttcgg ggacaccaag agaattgagg tgatgggtggg tatgggctac
1320
acacgggaag aaatcaaaga gtccttgacc agccagaagt acaacgaagt gaccgccacc
1380
tacctcctgc tgggcaggaa gactgagccc gacgagcacg ggggaggcgg agctgaagga
1440
ggagcggctg ccaggccgga aggcgagctg cagcaccgcg gggagtggga gtcgagggt
1500
gccccctcc agcccatgg tcagcagcgc ccacaacccc aacaaggcag agatcccaga
1560
gcgccggaag gacagcacga gcacccctgt gactgaccag ggctgggggg cagggtggg
1620
ggcgccacct gggccacatt cctcaggccc tgccttcac tcattcccca gacggaactc
1680
cttcttacca actccttctt ctaccattc attcattcaa caaacattta tcgagtgcct
1740
ctgtttgcct gagctcagtt tatacactaa catttgatgt tagcgtataa attagtgtc
1800

ggcccagcca ccccagggg cctccacagg cgcgtgcata acagcgatac agtacttaag
 1500
 tgtctgtgta tacaacaaa gaataaatga ttcattggtt tttttacttg gtttggtcag
 1560
 acaatggaaa tttgccatt ctgtcaaaaa aaaaa
 1595

<210> 4996
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 4996
 Met Lys Glu Ile Glu Thr Leu Val Glu Glu Lys Thr Lys Glu Ser Leu
 1 5 10 15
 Asp Val Ser Arg Leu Thr Arg Glu Gly Gly Pro Leu Leu Tyr Glu Gly
 20 25 30
 Ile Ser Leu Thr Met Asn Ser Lys Leu Leu Asn Gly Ser Gln Arg Val
 35 40 45
 Val Met Asp Gly Val Ile Ser Asp His Glu Cys Gln Glu Leu Gln Arg
 50 55 60
 Leu Thr Asn Val Ala Ala Thr Ser Gly Asp Gly Tyr Arg Gly Gln Thr
 65 70 75 80
 Ser Pro His Thr Pro Asn Glu Lys Phe Tyr Gly Val Thr Val Phe Lys
 85 90 95
 Ala Leu Lys Leu Gly Gln Glu Gly Lys Val Pro Leu Gln Ser Ala His
 100 105 110
 Leu Tyr Tyr Asn Val Thr Glu Lys Val Arg Arg Ile Met Glu Ser Tyr
 115 120 125
 Phe Arg Leu Asp Thr Pro Leu Tyr Phe Ser Tyr Ser His Leu Val Cys
 130 135 140
 Arg Thr Ala Ile Glu Glu Val Gln Ala Glu Arg Lys Asp Asp Ser His
 145 150 155 160
 Pro Val His Val Asp Asn Cys Ile Leu Asn Ala Glu Thr Leu Val Cys
 165 170 175
 Val Lys Glu Pro Pro Ala Tyr Thr Phe Arg Asp Tyr Ser Ala Ile Leu
 180 185 190
 Tyr Leu Asn Gly Asp Phe Asp Gly Gly Asn Phe Tyr Phe Thr Glu Leu
 195 200 205
 Asp Ala Lys Thr Val Thr Ala Glu Val
 210 215

<210> 4997
 <211> 1888
 <212> DNA
 <213> Homo sapiens

<400> 4997
 ntgcacgggg ccaactaggac cctcgggcgc ccttccctc ccccgccctg cccctctcc
 60
 cgccgcgcgg acccgggcgt tctcggcgcc cagcttttga gctcgcgtcc ccaggccggc
 120
 ggggggggag gggaagagag gggaccctgg gacccccgcc cccccaccc ggccgcccct
 180

<210> 4995

<211> 1595

<212> DNA

<213> Homo sapiens

<400> 4995

nntccggatt catggactcc agaagaagtg attcccaaga gattgcaaga gaaacagaag
60
tgaggacctt gaagaaactg catggttgga tcagtctgat gaagcacttg aggcttcctg
120
agcccaggca gatgtgaact cctggcaagg ggtgggcagg tccagtttgg gaagtcgggg
180
tgagagcccag ggctggccct ggaatgcagt cctcagagcg gctgtgctca taggtcagaa
240
cgggaaacag ccgtacgcat ctcccaggag attgggaacc ttatgaagga aatcgagacc
300
cttgtggaag agaagaccaa ggagtcactg gatgtgagca gactgaccgg ggaaggtggc
360
cccctgctgt atgaaggcat cagtctcacc atgaactcca aactcctgaa tggttcccag
420
cgggtggtga tggacggcgt aatctctgac cacgagtgtc aggagctgca gagactgacc
480
aatgtggcag caacctcagg agatggctac cggggtcaga cctccccaca tactcccaat
540
gaaaagtctt atggtgtcac tgtcttcaaa gccctcaagc tggggcaaga aggcaaagtt
600
cctctgcaga gtgccacact gtactacaac gtgacggaga aggtgcgggc catcatggag
660
tctacttcc gcctggatac gccctctac ttttctact ctcatctggt gtgccgact
720
gccatcgaag aggtccaggc agagaggaag gatgatagtc atccagtcca cgtggacaac
780
tgatccctga atgccgagac cctcgtgtgt gtcaaagagc cccagccta caccttcgcg
840
gactacagcg ccaccttta cctaaatggg gacttcgatg gcggaaactt ttatttcact
900
gaactggatg ccaagaccgt gacggcagag gtgtagcctc agtgtggaag agccgtggga
960
ttctcttcag gactgaaaa cccacatgga gtgaaggctg tcaccagggg gcagcgctgt
1020
gccatcgccc tgtggttcac cctggaccct cgacacagcg agcgggacag ggtgcaggca
1080
gatgacctgg tgaagatgct cttcagccca gaagagatgg acctctcca ggagcagccc
1140
ctggatgcc agcagggccc cccnngaac ctgcacaaga gtctctctca ggcagtgaat
1200
cgaagcccaa ggatgagcta tgacagcgtc caggtcagac ggatgggtga ctagaccat
1260
ggagaggaac tcttctgcac tctgagctgg ccagcccctc ggggctgcag agcagtgagc
1320
ctacatctgc cactcagccg aggggaccct gtcacagcc ttctacatgg tgctactgct
1380
cttggagtgg acatgaccag acaccgcacc ccctggatct ggctgagggc tcaggacaca
1440

tggaccttca ggccgccggg gccagggcg agggggccgc ggaccgtctc gggggccgcc
 60
 gctgcctagc ggcggggggg cgccccagc cgggagctgg ctttgctaca gctgaccact
 120
 ccagtcagga gagagagact gagaaggcta tggatcgact agcccgtgga acacagagca
 180
 ttcctaata cagtcctgcc cggggtgagg gcacccattc tgaagaggaa ggctttgcca
 240
 tggatgagga ggactctgat ggagaactga atacctggga gctgtcagaa gggacaaact
 300
 gtccacccaa ggaacagcct ggcgatcttt ttaatgagga ctgggactcg gagttgaaag
 360
 cagatcaagg gaatccatat gatgctgacg acatccagga gagcatttct caagagctta
 420
 aaccttggtt gtgctgtgcc ccacaaggag acatgatcta tgacccagc tggcaccatc
 480
 cgctccact gataccctat tattccaaga tggcttttga aacaggacag tttgacgatg
 540
 ctgaagattg agtgtggagc tttctgcctt gtaggtgggc gggcctccac gtcaagatct
 600
 cttttcctgt cttggaggtg aaaagtcata tctgagaaaa tgtttgcagt gaccctagt
 660
 ctgggggtaca cagaccagtg ttccttattg acagtgttca ataaggcccc gtcattctcg
 720
 ccagtcctgtt gttgttctta atgggctcct ccttgaaatg tgtgtgtgtt tgtgtcaaga
 780
 ggagttgtgt tctttgtaaa taaagggtta aaagagaaac caaaaaaaaa aaaaaaa
 837

<210> 4994

<211> 133

<212> PRT

<213> Homo sapiens

<400> 4994

Met	Asp	Arg	Leu	Ala	Arg	Gly	Thr	Gln	Ser	Ile	Pro	Asn	Asp	Ser	Pro
1				5				10						15	
Ala	Arg	Gly	Glu	Gly	Thr	His	Ser	Glu	Glu	Gly	Phe	Ala	Met	Asp	
		20						25					30		
Glu	Glu	Asp	Ser	Asp	Gly	Glu	Leu	Asn	Thr	Trp	Glu	Leu	Ser	Glu	Gly
		35					40					45			
Thr	Asn	Cys	Pro	Pro	Lys	Glu	Gln	Pro	Gly	Asp	Leu	Phe	Asn	Glu	Asp
		50				55					60				
Trp	Asp	Ser	Glu	Leu	Lys	Ala	Asp	Gln	Gly	Asn	Pro	Tyr	Asp	Ala	Asp
65					70					75				80	
Asp	Ile	Gln	Glu	Ser	Ile	Ser	Gln	Glu	Leu	Lys	Pro	Trp	Val	Cys	Cys
				85					90					95	
Ala	Pro	Gln	Gly	Asp	Met	Ile	Tyr	Asp	Pro	Ser	Trp	His	His	Pro	Pro
			100					105					110		
Pro	Leu	Ile	Pro	Tyr	Tyr	Ser	Lys	Met	Val	Phe	Glu	Thr	Gly	Gln	Phe
			115				120						125		
Asp	Asp	Ala	Glu	Asp											
130															

<400> 4991

aaattttatt acccagaact gtacaaactg gtgactggga aagagccac tcggagattc
 60
 tccaccattg tggaggagga aggccacgag ggcctcacgc acttcctgat gaacgaggtc
 120
 atcaagctgc agcagcagat gaaggccaag gacctgcaac gctgcgagct gctggccagg
 180
 ttgcggcagc tggaggatga gaagaagcag atgacgctga cgcgcgaggga gctgctaacc
 240
 ttccaggagc ggtactacaa gatgaaggaa gagcgggaca gctacaatga cgagctggtc
 300
 aaggtgaagg acgacaacta caacttagcc atgcgctacg cacagctcag tgaggagaag
 360
 aacatggcgg tcatgaggag ccgagacctc caactcgaga tcgatcagct aaagcaccgg
 420
 ttgaataaga tggaggagga atgtaagctg gagagaaatc agtctctaaa actgaagaat
 480
 gacattgaaa atcggcccaa gaaggagcag gttctggaac tggagcggga gaatgaaatg
 540
 ctgaagacca aaaaccagga gctgcagtc atcatccagg ccgggaagcg cagcctgcc
 600
 gactcagaca aggccatcct ggacatcttg gaacacgacc gcaaggaggc cctggaggac
 660
 aggcaggagc tggtaacag gatctacaac ctgcaggagg aggcccgcca ggcagaggag
 720
 ctgcgagaca agtacctgga ggagaaggag gacctggagc tcaagtgtc gacctggga
 780
 aaggactgtg aaatgtacaa gcaccgcatg aacacgggtca tgctgcag
 828

<210> 4992

<211> 69

<212> PRT

<213> Homo sapiens

<400> 4992

Asp Ile Leu Glu His Asp Arg Lys Glu Ala Leu Glu Asp Arg Gln Glu
 1 5 10 15
 Leu Val Asn Arg Ile Tyr Asn Leu Gln Glu Glu Ala Arg Gln Ala Glu
 20 25 30
 Glu Leu Arg Asp Lys Tyr Leu Glu Glu Lys Glu Asp Leu Glu Leu Lys
 35 40 45
 Cys Ser Thr Leu Gly Lys Asp Cys Glu Met Tyr Lys His Arg Met Asn
 50 55 60
 Thr Val Met Leu Gln
 65

<210> 4993

<211> 837

<212> DNA

<213> Homo sapiens

<400> 4993

tcacaagaga tgagttcctc agaaggcaga agacggagac catcatctac tcccagagaga
 780
 agaaccccaa cgcgttcgaa tgcacgccc ctgccaat tgaagctgtg gccgccaaga
 840
 acaagcactg cctgtggag gctgggatcg gctgcacaag agacttgatc aagtccaaca
 900
 tctaccccat cgtgctcttc atccgggtgt gtgagaagaa catcaagagg ttcagaaagc
 960
 tgctgccccg gectgagacg gaggaggagt tcctgcgcgt gtgccggctg aaggagaagg
 1020
 agctggaggc cctgccgtgc ctgtacgcca cgggtgaacc tgacatgtgg ggcagcgtag
 1080
 aggagctgct ccgcgttgtc aaggacaaga tcggcgagga gcagcgcaag accatctggg
 1140
 tggacgagga ccagctgtga ggcgggcgcc ctgggcagag agactctgtg gcgcggggca
 1200
 tcctatgagg caggcaccct gggcagagag atgcagtggg tgcgggggga tcctgtggcc
 1260
 cacagagctg cccagcaga cgctccgcc caccgggtga tggagccccg gggggacagt
 1320
 cgtgcctggg gaggagcagg gtacagccca tccccagc cctggctgac ctggcctagc
 1380
 agtttgccc tgctggcctt agcagggaga caggggagca aagaacgcca agccggaggc
 1440
 cccaggccag ccggcctctc gagagccaga gcagcagttg aatgtaatgc tggggacagg
 1500
 catgctgccg ccagtagggc ggggacccg acagccaggt gactaccagt cctggggaca
 1560
 cactcaccat aaacacatcc ccaggcagga cagatcgggg aaggggtgtg taccaggcta
 1620
 tgatttctct tgcattaaaa tgtattatta tttctttgtt tcgacccttt gtttgtgaac
 1680
 agcttgccag gccttgagcc cttgcgcct tcctaacctg aaa
 1723

<210> 4990

<211> 54

<212> PRT

<213> Homo sapiens

<400> 4990

Thr	Ala	Pro	Thr	Thr	Pro	Cys	Gly	His	Ser	Gly	Thr	Pro	Cys	Ser	Gln
1				5					10					15	
Lys	Lys	Arg	Phe	Gln	Gln	Ala	Thr	Pro	Gly	Ser	Ala	Pro	Val	Ser	Arg
			20					25					30		
Glu	Gln	Ala	Ser	Phe	Leu	Ala	Ser	Ser	Phe	Ser	Ser	Ser	Ala	Gly	Pro
		35					40					45			
Arg	Thr	Ser	Ile	Ser	Gly										

<210> 4991

<211> 828

<212> DNA

<213> Homo sapiens

gtcgccttgc acccatatgg ctgctgagga tgggagagat ggacgcggtc ggagaga
357

<210> 4988

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4988

Met	Gly	Ala	Arg	Arg	Leu	Leu	Pro	Ser	Leu	Arg	His	Cys	Ser	Val	Tyr
1				5					10					15	
Ser	Ser	Ser	Cys	Asp	Ser	Glu	Lys	Lys	Ser	Leu	Trp	Leu	Phe	Ala	Ala
			20					25					30		
Phe	Pro	Leu	Cys	Phe	Leu	Gly	Thr	Ala	Phe	Pro	Gln	Gly	Glu	Gln	Arg
	35						40					45			
Pro	Leu	Glu	Ala	Lys	Gly	Leu	Ala	Thr	Gln	Gly	Ala	Ser	Leu	Pro	Leu
	50					55				60					
Leu	Pro	Thr	Val	Thr	Cys	Val	Ser	Ile	Lys	Ser	Trp	Lys	Met	Glu	Cys
65					70					75				80	
Pro	His	Gln	Gly	Asp	Gly	Val	Thr	Thr	Glu	Ala	Gly	Ser	Glu	Leu	Pro
				85					90					95	
Gln	Leu	Leu	Gln	Ala	Pro	Trp	Pro	Arg							
				100				105							

<210> 4989

<211> 1723

<212> DNA

<213> Homo sapiens

<400> 4989

tgatcacatc gggggactct ttctacatcc ggctgaacct gaacatctcc agccagctgg
60
acgcctgcac catgtccctg aagtgtgacg atgttgcgca cgtccgtgac accatgtacc
120
aggacaggca cgagtggctg tgcgcgcggg tgcaccttt cacagaccat gacctggata
180
tgggcacatc acccagctac agccgagccc agcagctcct cctgggtgaaa ctgcagcgcc
240
tgatgcaccg aggcagcccg gaggaggtag acggcaccca ccacaccctg cgggcactcc
300
ggaacaccct gcagccagaa gaagcgcttt caacaagcga ccccggggtc agccccctgc
360
tctcgcgagc aagcttcctt tttggccagc tccttcagtt cgtcagcagg tccgagaaca
420
agtataagcg gatgaacagc aacgagcggg tccgcacatc ctcggggagt ccgctagggg
480
gcctggcccg gtccctcgctg gacgccacca agctcttgac tgagaagcag gaagagctgg
540
accctgagag cgagctgggc aagaacctca gcctcatccc ctacagcctg gtacgcgcct
600
tctactgcga ggcgcgcggg cccgtgctct tcacacccac cgtgctggcc aagacgctgg
660
tgcagagget gctcaactcg ggaggtgcc aaggagttcac catctgcaag tcagatatcg
720

945 950 955 960
 Glu Asp Ala Asp Ser Pro Gln Ala Val Asp Val Ile Pro Val Asp Met
 965 970 975
 Ile Ser Leu Ala Lys Gln Ile Ile Glu Ala Thr Pro Glu Arg Ile Lys
 980 985 990
 Arg Glu Asp Phe Val Gly Leu Pro Glu Ala Gly Ala Ser Met Arg Glu
 995 1000 1005
 Arg Thr Gly Ala Val Gly Leu Ser Glu Thr Met Ser Trp Leu Ala Ser
 1010 1015 1020
 Tyr Leu Glu Asn Val Asp His Phe Pro Ser Ser Thr Pro Pro Ser Glu
 1025 1030 1035 1040
 Leu Pro Phe Glu Arg Gly Arg Leu Ala Val Pro Ser Ala Pro Ser Trp
 1045 1050 1055
 Ala Glu Phe Leu Ser Ala Ser Thr Ser Gly Lys Met Glu Ser Asp Phe
 1060 1065 1070
 Ala Leu Leu Thr Leu Ser Asp His Glu Gln Arg Glu Leu Tyr Glu Ala
 1075 1080 1085
 Ala Arg Val Ile Gln Thr Ala Phe Arg Lys Tyr Lys Gly Arg Arg Leu
 1090 1095 1100
 Lys Glu Gln Gln Glu Val Ala Ala Ala Val Ile Gln Arg Cys Tyr Arg
 1105 1110 1115 1120
 Lys Tyr Lys Gln Leu Thr Trp Ile Ala Leu Lys Phe Ala Leu Tyr Lys
 1125 1130 1135
 Lys Met Thr Gln Ala Ala Ile Leu Ile Gln Ser Lys Phe Arg Ser Tyr
 1140 1145 1150
 Tyr Glu Gln Lys Arg Phe Gln Gln Ser Arg Arg Ala Ala Val Leu Ile
 1155 1160 1165
 Gln Gln His Tyr Arg Ser Tyr Arg Arg Arg Pro Gly Pro Pro His Arg
 1170 1175 1180
 Thr Ser Ala Thr Leu Pro Ala Arg Asn Lys Gly Ser Phe Leu Thr Lys
 1185 1190 1195 1200
 Lys Gln Asp Gln Ala Ala Arg Lys Ile Met Arg Phe Leu Arg Arg Cys
 1205 1210 1215
 Arg His Arg Met Arg Glu Leu Lys Gln Asn Gln Glu Leu Glu Gly Leu
 1220 1225 1230
 Pro Gln Pro Gly Leu Ala Thr
 1235

<210> 4987

<211> 357

<212> DNA

<213> Homo sapiens

<400> 4987

gtcggggcca cggagcttgc aggagctgag gcagctcaga gccagcctcg gtggtgaccc
 60
 cgtctccctg gtggggacac tccattttcc agctcttgat agaaacacag gtgactgtcg
 120
 ggaggagtgg gagggaggct ccttgtgtgg cgagtccctt cgcctctagt ggtctctgct
 180
 ccccttgtgg aaacgcagtt ccaagaaaac aaagaggaaa tgctgcgaag agccacaagg
 240
 actttttctc tgagtcacaa gaagacgaat atacgctgca atgacgcagt gagggagaagaa
 300

```

      515      520      525
Pro Val Gly Ala Ser Glu Leu Glu Pro Phe Ser Leu Ser Ser Phe Pro
  530      535      540
Asp Leu Met Gly Glu Leu Ile Ser Asp Glu Ala Pro Ser Ile Pro Ala
  545      550      555      560
Pro Thr Pro Gln Leu Ser Pro Ala Leu Ser Thr Ile Thr Asp Phe Ser
      565      570      575
Pro Glu Trp Ser Tyr Pro Glu Gly Gly Val Lys Val Leu Ile Thr Gly
      580      585      590
Pro Trp Thr Glu Ala Ala Glu His Tyr Ser Cys Val Phe Asp His Ile
      595      600      605
Ala Val Pro Ala Ser Leu Val Gln Pro Gly Val Leu Arg Cys Tyr Cys
  610      615      620
Pro Ala His Glu Val Gly Leu Val Ser Leu Gln Val Ala Gly Arg Glu
  625      630      635      640
Gly Pro Leu Ser Ala Ser Val Leu Phe Glu Tyr Arg Ala Arg Arg Phe
      645      650      655
Leu Ser Leu Pro Ser Thr Gln Leu Asp Trp Leu Ser Leu Asp Asp Asn
      660      665      670
Gln Phe Arg Met Ser Ile Leu Glu Arg Leu Glu Gln Met Glu Lys Arg
      675      680      685
Met Ala Glu Ile Ala Ala Ala Gly Gln Val Pro Cys Gln Gly Pro Asp
  690      695      700
Ala Pro Pro Val Gln Asp Glu Gly Gln Gly Pro Gly Phe Glu Ala Arg
  705      710      715      720
Val Val Val Leu Val Glu Ser Met Ile Pro Arg Ser Thr Trp Lys Gly
      725      730      735
Pro Glu Arg Leu Ala His Gly Ser Pro Phe Arg Gly Met Ser Leu Leu
      740      745      750
His Leu Ala Ala Ala Gln Gly Tyr Ala Arg Leu Ile Glu Thr Leu Ser
      755      760      765
Gln Trp Arg Ser Val Glu Thr Gly Ser Leu Asp Leu Glu Gln Glu Val
  770      775      780
Asp Pro Leu Asn Val Asp His Phe Ser Cys Thr Pro Leu Met Trp Ala
  785      790      795      800
Cys Ala Leu Gly His Leu Glu Ala Ala Val Leu Leu Phe Arg Trp Asn
      805      810      815
Arg Gln Ala Leu Ser Ile Pro Asp Ser Leu Gly Arg Leu Pro Leu Ser
      820      825      830
Val Ala His Ser Arg Gly His Val Arg Leu Ala Arg Cys Leu Glu Glu
      835      840      845
Leu Gln Arg Gln Glu Pro Ser Val Glu Pro Pro Phe Ala Leu Ser Pro
  850      855      860
Pro Ser Ser Ser Pro Asp Thr Gly Leu Ser Ser Val Ser Ser Pro Ser
  865      870      875      880
Glu Leu Ser Asp Gly Thr Phe Ser Val Thr Ser Ala Tyr Ser Ser Ala
      885      890      895
Pro Asp Gly Ser Pro Pro Pro Ala Pro Leu Pro Ala Ser Glu Met Thr
      900      905      910
Met Glu Asp Met Ala Pro Gly Gln Leu Ser Ser Gly Val Pro Glu Ala
      915      920      925
Pro Leu Leu Leu Met Asp Tyr Glu Ala Thr Asn Ser Lys Gly Pro Leu
  930      935      940
Ser Ser Leu Pro Ala Leu Pro Pro Ala Ser Asp Asp Gly Ala Ala Pro

```

4161

cattccgccc ttccctttaa gacgcaccgc cccctctcag tcactcccaa gatggcggac
 4680
 ctactgggct ccatcctgag ctccatggag aagccaccca gcctcgggtga ccaggagact
 4740
 cggcgcaagg cccgagaaca ggccgcccgc ctgaagaaac tacaagagca agagaaacaa
 4800
 cagaaagtgg agtttcgtaa aaggatggag aaggaggtgt cagatttcat tcaagacagt
 4860
 gggcagatca agaaaaagtt tcagccaatg aacaagatcg agaggagcat actacatgat
 4920
 gtggtggaag tggctggcct gacatccttc tcctttgggg aagatgatga ctgtcgctat
 4980
 gtcattgatct tcaaaaagga gtttgcaccc tcagatgaag agctagactc ttaccgtcgt
 5040
 ggagaggaat gggaccccca gaaggctgag gagaagcggg agctgaagga gctggcccg
 5100
 aggcaagagg agggagcagc ccagcagggg cctgtggtgg tgagccctgc cagcgactac
 5160
 aaggacaagt acagccacct catcggaag ggagcagcca aagacgcagc ccacatgcta
 5220
 caggccaata agacctacgg ctgtgtgccc gtggccaata agaggacac acgctccatt
 5280
 gaagaggcta tgaatgagat cagagccaag aagcgtctgc ggagagtggt ggaagagttg
 5340
 ccgccaacct cctaggcgcc ccgcccagct ccttttgacc cctggggcag ggcagggggc
 5400
 agggagagac aaggctgctg ctattagagc ccatcctgga gccccacctc tgaaccacct
 5460
 cctaccagct gtccctcagg ctgggggaaa acaggtgttt gatttgtcac cgttggagct
 5520
 tggatatgtg cgtggcatgt gtgtgtgtgt gtgtgagagt gtgaatgcac aggtgggtat
 5580
 ttaatctgta ttattccccg ttcttggaat tttcttcccc atggggctgg ggtactttac
 5640
 attcaataaa tactgtttaa cccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 5695

<210> 4986

<211> 1239

<212> PRT

<213> Homo sapiens

<400> 4986

Arg	Cys	Arg	Arg	His	Pro	Arg	Asp	Pro	Gly	Ser	Thr	Asp	Ser	Pro	Ser
1			5						10				15		
Pro	Arg	Pro	Leu	Arg	Pro	Gly	Val	Thr	Leu	Pro	Pro	Gly	Ala	Leu	Thr
		20					25					30			
Met	Asn	Thr	Lys	Asp	Thr	Thr	Glu	Val	Ala	Glu	Asn	Ser	His	His	Leu
		35				40					45				
Lys	Ile	Phe	Leu	Pro	Lys	Lys	Leu	Leu	Glu	Cys	Leu	Pro	Arg	Cys	Pro
	50					55					60				
Leu	Leu	Pro	Pro	Glu	Arg	Leu	Arg	Trp	Asn	Thr	Asn	Glu	Glu	Ile	Ala
65				70					75				80		
Ser	Tyr	Leu	Ile	Thr	Phe	Glu	Lys	His	Asp	Glu	Trp	Leu	Ser	Cys	Ala

gaggctggag cctcaatgcg ggagcggaca ggggctgtgg ggctcagtga gaccatgtcc
3060
tggetggcca gctacctgga gaatgtggac catttcccca gctcaacccc tcccagcgaa
3120
ctgccctttg agcgaggtcg cctggctgtc ccttcagcac cctcctgggc agagtttctc
3180
tctgcatcca ccagtggcaa gatggaaagt gattttgccc tgctgacact atcagatcac
3240
gagcagcggg aactgtatga ggctgcccga gtcattccaga cggccttccg aaagtacaag
3300
ggccggcggc tgaaggagca gcaggaggta gcagcagctg taatccagcg ctgttaccgg
3360
aagtacaagc agctgacctg gattgcactt aagtttgac tctataagaa gatgaccag
3420
gcggccatcc tgatccagag caagttccga agctactatg aacagaagcg atttcagcag
3480
agccgcgag cggtgtgct catccagcag cactaccgct cctaccgccc caggccccggc
3540
cctccccacc ggacttcggc caccctgcct gcccgcaaca aaggctcctt tctaccaag
3600
aagcaggacc aggcagcccc gaagatcatg agattcctgc ggcgctgccg acacaggatg
3660
agggaaactga agcagaacca ggagctggaa gggcttcccc agccgggact ggccacatga
3720
cctggccacc gcctttctca ccacctggg ggcgctcgt gcagtcttaa caggagaggg
3780
gctttctggg gcagggggag cccctgtcgg cagctttcct gttcacctt gttggagccc
3840
tctgtaggcc tcttccctcc tccccacgcc ttgctccac accctctcc tcgtccctcc
3900
tggtcgtgcc ccgtctcttt tggctcctggc tccagaaaac ccgcgcccc catacctgca
3960
tcttcgctg tgacctcgg agccctgcct gccctgctc cccagctcct cctgcctgca
4020
cccgaactcg cccctcctg acttgcccta tttatttgtt cgacgcgtct ctgaatgtat
4080
ccgcctcgg tcccaccact gccttcgctg cgcacgcccc tcgtgtttca gggctgaccg
4140
tgtccccacc cgactccgca tgtttgctg tgtttcctcc ctctctggcc ctgtcttacc
4200
ccatcacccg actctggcca ctgacctcag ggccgaaggg gaggtggtgt acataggaac
4260
gcgttgcgga gtccgccccg tcccccgagg ggaggggtct tgtacatact gtaacataca
4320
gagtatagtg aagaatctat ttaaggcgcc gcggggaggg ctgcacggcc gggcttgtgg
4380
ttctctagcg cggcgggggc ctctgcggc ctccacgggc actttctact tgtgcatggg
4440
cttggtttat acgaattgcc attaaacatc gctgcaccag ccagcctccg gcctctgtct
4500
gcggggggcg ggcggggcct aggcagctg gaggccgcca tgcaccgccc gcctgggatc
4560
tgcgcccagg ccaggcgggc ccagggtttt ccgcctccga cgtgtttccg gccttaaagg
4620

gctgctcggg gtccccacc acagtcagta gcaggtggga gaagaggaaa ctgcttcttc
1440
atccaagatg atgacagtgg ggaggagctc aagggtcacg gggctgcccc acccatacct
1500
tcacccccctc cctcaccccc accctcacct gcccccttgg agccgtcaag cagggtagga
1560
agaggagagg ccttgtttgg aggacctgtt ggggccagtg aactggagcc cttcagtctt
1620
tcatcattcc cagaccttat gggagaactc atcagtgcag aagctccaag catccctgct
1680
ccgaccccc agctgtctcc tgctcttagc accatcacag acttctcccc agagtggctc
1740
taccagagg gtgggtcaa ggtgctcctc acaggtcctt ggaccgaagc cgccgagcat
1800
tactcctgtg tctttgatca catcgcagtg ccagcctcac ttgtccagcc tgggtcttta
1860
cgctgctact gtcccgccca tgaggtaggg ctggtgtctt tgcaggtggc agggcgggag
1920
gggccccctt ctgcttctgt gctctttgag tatcgagccc gccgattcct gtctctgcct
1980
agtactcaac ttgactggct gtcactggac gacaaccagt tccggatgtc catactagag
2040
cgactggagc agatggagaa gcggatggca gagatcgag cagctgggca ggtgccttgc
2100
cagggtcctg atgctcctcc agttcaggat gaaggccagg ggcctgggtt cgaagcacgg
2160
gtagtggctt tggtagaaag catgatccca cgctccacct ggaagggtcc tgaacgtctg
2220
gcccattgaa gccccttcg gggcatgagc cttctgcacc tggctgctgc ccagggtat
2280
gcccgcctca tcgagaccct gagccagtgg cggagtgtgg agactggaag cttggactta
2340
gagcaggagg ttgaccgct caactggat catttctctt gcacccctct gatgtgggct
2400
tgtgccctgg gacacctgga agctgctgtg ctccttttcc gttggaaccg acaggcactg
2460
agcattcccc actctctggg cegtctgcca ttgtctgtgg ctcattcccc gggctcatgtg
2520
cgcttgccc gctgccttga ggaactacag agacaggagc cttcgggtgga gccccattt
2580
gccctatcgc caccctctc cagcccagac actggtctga gcagcgtctc ctgcacctc
2640
gagctgtcgg atggcacctt ttccgtcacg tcagcctatt ctagtcccc agatggcagt
2700
ccccccctg cacctctgcc agcctctgag atgactatgg aggacatggc cccaggccag
2760
ctttctctg gtgtcccaga agcccccta ctcctcatgg actatgaggc taccaactcc
2820
aaggggcccc tctctccct tctgcctc ccaccagctt cagatgatgg ggctgtcca
2880
gaggacgtg acagcccaca ggctgtggat gtgatcccg tggacatgat ctactagcc
2940
aagcagatca tcgaagccac accggagcgg attaaacgag aggacttcgt ggggctgccc
3000

245

250

255

<210> 4985
<211> 5695
<212> DNA
<213> Homo sapiens

<400> 4985
cgctgccgcc gtcacccgcg ggaccccggg agcacagact cccctcccc ccggcccttc
60
aggccggggg tgaccttgcc ccctggagcc ctcacatga ataccaagga caccaccgag
120
gttgctgaaa acagccacca cctgaagatc tttctcccca agaagctgct ggagtgtctt
180
cctcgctgcc cgctgctgcc tccagagagg ctacgggtga atacaaatga ggagattgca
240
tcctacctga tcacctttga gaagcatgat gagggtgtgt cttgtgcccc aaagacaagg
300
cctcagaatg gctccatcat cctctacaat cgcaagaagg tgaaatatcg gaaggatggt
360
tacctctgga agaagcggaa ggatgggaag accacccgag aggaccacat gaagctgaag
420
gtccagggca tggagcctgt ctctctggcag tgtctctatg gctgctacgt tcaactcttc
480
atcgctccca cattccatcg gcgctgctac tggctgctcc agaaccctga catcgctctt
540
gtgcactacc tgaacgtccc agccctggag gactgtggaa agggctgcag ccccatcttt
600
tgttccatca gcagcgaccg tcgagagtgg ctgaagtggc cccggggagga gttgttggga
660
cagctgaagc ccatgtttca tggcatcaag tggagctgag ggaatggaac agaagagttc
720
tctgtagaac acctggtgca gcagattttg gacaccacc caaccaagcc tgctccccga
780
accacgcct gtctctgcag tgggggggctt ggttctggga gccttaccga caaatgcagc
840
agcagaaaac accgcatcat ctctcccaaa gtggagcccc gagctttaac cctgacctct
900
atccccacc ctcaccccc agagcctcct ccactgatag cccacttcc cccagagctc
960
ccaaggcac acacctcccc atcttcttcc tcttcttct cctcatcagg ttttgagag
1020
cccctagaaa tcagacctag ccctccact tctcgagggg gttcttcaag aggaggcact
1080
gctatcctcc tctgacagg actggagcag cgggctggag gcttgacgcc caccaggcac
1140
ttggctccac aggtgatcc taggccttcc atgagtttgg cagtggttgt aggcactgag
1200
ccttctgccc caccagctcc tcccagtcct gcctttgacc ctgacgttt tctcaacagc
1260
ccccagagg gccagacata tggagggggg caggagtaa gccagactt ccccgaggca
1320
gaggccgctc ataccctctg ttctgcccta gagcctgctg ctgccctgga gcccaggca
1380

cagctcgtct tctgctacac catcattgag aggaacaatc gccagatgct gccagtcatt
 1020
 aggagtaccg ctggaggaga ctcagtgcag acctgcacaa acccactgga caccttcttc
 1080
 ccctttgatc cctgtgtgct gaagagggtca aagaaattca ttgatcctat ttatcagggtg
 1140
 tgggaagaca tgagtgtgta agagctacag gagttcaaga aacccatgaa aaaggacata
 1200
 gtggaagatg aagatgatga ctttctgaaa ggcgaaattc cccagaaatt agtagtaagt
 1260
 ggggtctttg tgggttggga agtagtttta atgtagaaag acattttacat ataagtctgt
 1320
 ttaatttcaa aggagtttgt gaaaaaaaaat ccatggtgaa aatgaaacaa tgacatggtt
 1380
 aatctggaac ttacgttctt ataccaataa aagggtacc
 1418

<210> 4984

<211> 256

<212> PRT

<213> Homo sapiens

<400> 4984

Leu	Gly	Phe	Ala	Glu	Ala	Phe	Leu	Glu	His	Leu	Trp	Lys	Lys	Leu	Gln
1				5					10					15	
Asp	Pro	Ser	Asn	Pro	Ala	Ile	Ile	Arg	Gln	Ala	Ala	Gly	Asn	Tyr	Ile
			20					25					30		
Gly	Ser	Phe	Leu	Ala	Arg	Ala	Lys	Phe	Ile	Pro	Leu	Ile	Thr	Val	Lys
		35					40					45			
Ser	Cys	Leu	Asp	Leu	Leu	Val	Asn	Trp	Leu	His	Ile	Tyr	Leu	Asn	Asn
	50					55					60				
Gln	Asp	Ser	Gly	Thr	Lys	Ala	Phe	Cys	Asp	Val	Ala	Leu	His	Gly	Pro
65					70				75					80	
Phe	Tyr	Ser	Ala	Cys	Gln	Ala	Val	Phe	Tyr	Thr	Phe	Val	Phe	Arg	His
			85					90						95	
Lys	Gln	Leu	Leu	Ser	Gly	Asn	Leu	Lys	Glu	Gly	Leu	Gln	Tyr	Leu	Gln
		100					105					110			
Ser	Leu	Asn	Phe	Glu	Arg	Ile	Val	Met	Ser	Gln	Leu	Asn	Pro	Leu	Lys
	115					120					125				
Ile	Cys	Leu	Pro	Ser	Val	Val	Asn	Phe	Phe	Ala	Ala	Ile	Thr	Asn	Lys
	130					135					140				
Tyr	Gln	Leu	Val	Phe	Cys	Tyr	Thr	Ile	Ile	Glu	Arg	Asn	Asn	Arg	Gln
145				150					155					160	
Met	Leu	Pro	Val	Ile	Arg	Ser	Thr	Ala	Gly	Gly	Asp	Ser	Val	Gln	Thr
			165					170					175		
Cys	Thr	Asn	Pro	Leu	Asp	Thr	Phe	Phe	Pro	Phe	Asp	Pro	Cys	Val	Leu
		180					185						190		
Lys	Arg	Ser	Lys	Lys	Phe	Ile	Asp	Pro	Ile	Tyr	Gln	Val	Trp	Glu	Asp
	195					200					205				
Met	Ser	Ala	Glu	Glu	Leu	Gln	Glu	Phe	Lys	Lys	Pro	Met	Lys	Lys	Asp
	210				215						220				
Ile	Val	Glu	Asp	Glu	Asp	Asp	Asp	Phe	Leu	Lys	Gly	Glu	Ile	Pro	Gln
225				230					235					240	
Lys	Leu	Val	Val	Ser	Gly	Val	Phe	Val	Gly	Trp	Glu	Val	Val	Leu	Met

<211> 73
 <212> PRT
 <213> Homo sapiens

<400> 4982
 Met Cys Ile Leu Phe Cys Phe Ala Leu Leu Cys Phe Glu Thr Glu Ser
 1 5 10 15
 Arg Ser Val Ile Gln Ala Gly Val Gln Trp His Asp Leu Gly Ser Leu
 20 25 30
 Gln Pro Pro Ser Pro Arg Phe Lys Arg Phe Ser Cys Leu Leu Ser
 35 40 45
 Ser Trp Asp Tyr Arg Cys Ser Pro Pro His Pro Ala Asn Phe Cys Ile
 50 55 60
 Phe Ser Arg Asp Gly Val Ser Pro Cys
 65 70

<210> 4983
 <211> 1418
 <212> DNA
 <213> Homo sapiens

<400> 4983
 cgtggtttct catgccaata ctggtggaaa aatttccatt tgttcgaaaa tcagagagaa
 60
 cactggaatg ttacgttcat aacttactaa ggattagtgt atattttcca acccttgagg
 120
 catgaaattc tggagcttat tattgaaaaa ctactcaagt tggatgtgaa tgcattcccg
 180
 cagggtattg aagatgctga agaaacagca actcaaactt ttggtgggac agattccacg
 240
 gaaggattgt ttaatatgga tgaagatgaa gaaactgaac atgaaacaaa ggctgggtcct
 300
 gaacggctcg accagatggt gcatcctgta gccgagcgcc tggacatcct gatgtctttg
 360
 gttttgtcct acatgaagga tgtctgctat gtagatggta aggttgataa cggcaaaaca
 420
 aaggatctat atcgcgacct gataaacatc ttgacaaaac tcctgttgcc caccatgcc
 480
 tcctgccatg tacagttttt catgttttac ctctgtagtt tcaaattggg attcgcagag
 540
 gcatttttgg aacatctctg gaaaaaattg caggacccaa gtaatcctgc catcatcagg
 600
 caggctgctg gaaattatat tggaagcttt ttggcaagag cttaaatttat tcctcttatt
 660
 actgtaaaat catgcctaga tcttttggtt aactggctgc acatatacct taataaccag
 720
 gattcgggaa caaaggcatt ctgcgatggt gctctccatg gaccatttta ctcagcctgc
 780
 caagctgtgt tctacacctt tgtttttaga cacaagcagc ttttgagcgg aaacctgaaa
 840
 gaaggtttgc agtatcttca gagtctgaat tttgagcgg tagtgatgag ccagctaaat
 900
 cccctgaaga ttgcctgcc ctcaagtgtt aacttttttg ctgcaatcac aaataagtac
 960

cttaggcccc tcatttaaaa acggttatac tataaaatct gcttttcaca ctgggtgata
420
ataacttga caaattctat gtgtattttg ttttgttttg ctttgctttg ttttgagacg
480
gagtctcgt ctgtcatcca ggctggagtg cagtggcatg atctcggtc actgcaaccc
540
ccatctccca ggttcaagcg attctcctgc ctctcctaa gtagctggga ctacaggtgc
600
tcaccaccac acccggtctaa tttttgtatt ttagtagag acgggggttc accatgttga
660
ccaggctggt ctcgaaactcc tgacctggtg atctgcccac ccaggcctcc caaagtgtg
720
ggattaaagg tgtgagccac catgcctggc cctatgtgtg ttttttaact actaaaaatt
780
attttttaa tgattgagtc ttctttatgg aaacaactgg cctcagccct tgcgccctta
840
ctgtgattcc tggcttcatt ttttgctgat ggttccccct cgtcccaaact ctctctccca
900
gtacaccagt tgttctctcc ccacctcagc cctctcctgc atctcctgt acccgcaacg
960
aaggcctggg ctttcccacc ctccctcctt agcaggtgcc gtgctgggac accatacggg
1020
ttggtttcac ctctcagtc ccttgcttac ccagtgaga gtctgatctt gtttttattg
1080
ttattgcttt tattattatt gcttttatta tcattaaaac tctagtctt gttttgtctc
1140
tccgaatgaa gaagtatgta ttttcattag gccaaagtctg cgggaaggct ggggcagcag
1200
catgaagtgt ttgaggaagt gggttgggta tgtcagtttc catctcctct ctgagcctgt
1260
cagggtgttt ctggagtgc gagcaggagc accctgctgg agaggccaag gcatagctgt
1320
gggcaggctc gggcttcagt ttttccatgc ccaccatttg cccctttgtc ctagggtact
1380
ttgaccagca gggatatgtg gtgctcatac tccccacct acatgttccc aggttctgtc
1440
ccatggcaca ggtgatggc tccctctcag ctctgggtcc atctccctgg cctagtctc
1500
cagcatctgc tcacaggttc gagccacatc actgagcttg aggcgggcat agtccactcg
1560
cttcagagcc atctgacagt ccttccctga agagtagctg gagccctcat ggggctgccc
1620
tgtggccacc tgggtgaggt agcggatctg agctgacagc tccgcctcca cgtgttgac
1680
tgaagcggtg aaggccgcg cctgccggtc taggagccgc tcgttagttt tttccttgga
1740
caattctagg atcacagtac ctgcattctg aaggatggcg ccgatttccc gttcaatgtc
1800
ttccagagcg cgtagtctct cgttcgccag gctgtaggta gccattatca ctctgggaat
1860
tctcaccaag agtttctcct cagaaacgcg acgcttggtc cc
1902

<210> 4982

<400> 4980

Glu Gly Leu Asp Gly Ser Phe Pro Ala Val Ile Asp Tyr Thr Pro Tyr
 1 5 10 15
 Leu Lys Tyr Ile Gln Ser Ser Asp Ser Ile Ser Ser Asp Glu Glu Glu
 20 25 30
 Leu Arg Thr Leu Gly Ser Ser Gly Ser Glu Ser Ser Thr Pro Glu Asn
 35 40 45
 Val Gly Pro Pro Phe Leu Met Asp Glu Asn Ser Trp Phe Asn Lys Cys
 50 55 60
 Lys Arg Val Lys Gln Lys Tyr Gln Leu Thr Leu Glu Gln Lys Gly Tyr
 65 70 75 80
 Leu Glu Glu Leu Leu Arg Leu Arg Glu Asn Gln Leu Ser Glu Ser Val
 85 90 95
 Ser Gln Asn Lys Ile Leu Leu Gln Arg Ile Glu Asp Ser Asp Leu Ala
 100 105 110
 His Lys Leu Glu Lys Glu Gln Leu Glu Tyr Ile Ile Val Glu Leu Gln
 115 120 125
 Asp Gln Leu Thr Val Leu Lys Asn Asn Asp Leu Arg Ser Arg Gln Glu
 130 135 140
 Leu Thr Ala His Leu Thr Asn Gln Trp Pro Ser Pro Gly Ala Leu Asp
 145 150 155 160
 Val Asn Ala Val Ala Leu Asp Thr Leu Leu Tyr Arg Lys His Asn Lys
 165 170 175
 Gln Trp Lys Ser Tyr Gln Ser Leu Asp Gln Leu Ser Ala Glu Val Ser
 180 185 190
 Leu Ser Gln Thr Ser Leu Asp Pro Gly Gln Ser Gln Glu Gly Asp Gly
 195 200 205
 Lys Gln Asp Thr Leu Asn Val Met Ser Glu Gly Lys Glu Asp Thr Pro
 210 215 220
 Ser Leu Leu Gly Leu Cys Gly Ser Leu Thr Ser Val Ala Ser Tyr Lys
 225 230 235 240
 Ser Leu Thr Ser Leu Lys Ser Asn Asp Tyr Leu Ala Ser Pro Thr Thr
 245 250 255
 Glu Met Thr Ser Pro Gly Leu Thr Pro Ser
 260 265

<210> 4981

<211> 1902

<212> DNA

<213> Homo sapiens

<400> 4981

nggtccacag ccaggacatc agccacagt cgggtcctgt gcctcctggc catcatcttc
 60
 atcctcaccg cagccctttc ctatgtgctg tgcaagagga ggagggggca gtcaccgcag
 120
 tcctctccag atctgccggt tcattatata cctgtggcac ctgactctaa tacctgagcc
 180
 aagaatggaa gtttgtgagg agacggactc tatgttgccc aggtgttat ggaactcctg
 240
 agtcaagtga tcctcccacc ttggcctctg aaggtgcgag gattataggc gtcacctacc
 300
 acatccagcc tacacgtatt tgtaatatc taacatagga ctaaccagcc actgcctct
 360

cctgaattta acaattttgc agctattttg gaacagattt taagccaccg gctaaaaggt
540
caagtaacct gggttggtta tgaaagtcct cgtagcttct gggactatat cagagtggct
600
tgccggaaag ttccacagaa ttgtatctgc agcattgaaa atatggaaaa tgtcagttct
660
tctagagcta agggtagagc ctggatcaga gtagcactca tggaaaaaca tttatctgaa
720
tacatctcta cagctctgag agacttcaaa acaaccagga gattttatga agatggagca
780
attgtcttgg gtgaagaagc aaatatgctt gctggcatgc ttctaggact caatgctatt
840
gatttcagtt tctgcctaaa gggagagggg ctggatggca gttttcctgc tgtaatagac
900
tatacccat atttgaagta tatccaaagt tctgatagta tcagcagtga tgaggaggag
960
ctaaggactt tgggaagcag tggtagcgaa agcagtactc cagagaatgt cggacctcct
1020
ttcctcatgg atgagaacag ttggttcaac aagtgtgaaga gagttaaaca aaagtatcag
1080
cttaccctgg aacagaaggg ttaccttgaa gaactcttac gacttcgaga gaaccaacta
1140
tctgaatctg tctcccagaa taaaatacta cttcaaagga ttgaagattc cgatctggct
1200
cataaactgg agaaggaaca attagaatat ataattgtgg agcttcaaga tcagctgact
1260
gtgctaaaga ataatgattt aagatcgaga caagagttaa ctgcccatct caccaaccag
1320
tggccttctc caggagctct ggatgtcaat gctgttgctt tggatacgtt gctttaccga
1380
aaacacaata aacagtggaa aagttatcaa agtcttgacc agttatcagc agaagttagc
1440
ctttctcaga cttcactaga tccaggccag tcacaagaag gagatggaaa acaagacaca
1500
ttaaatgtaa tgagtgaagg taaggaagat actccctcat tacttggcct ctgtggatct
1560
ctaacgtcag tggcaagtta caagtctcta acaagcttaa aatctaata ga ctacctgca
1620
agtcctacaa cagagatgac aagtcaggc ctaactccat cctgaaaatt tttgtgtaaa
1680
agccaaaact ttttatgttg taaatgttta atttacatgt ttgactgctg ggaagacctt
1740
tgaaatttta tattgttctg gtacatgtct gaaattctat tgcttggaga gaatccctc
1800
cagataagag attttgagtg aaaaacataa tgatcctgcc atttttcatt tttaaaattc
1860
ttaca
1865

<210> 4980

<211> 266

<212> PRT

<213> Homo sapiens

```
<210> 4979
<211> 1865
<212> DNA
<213> Homo sapiens
```

```

<400> 4979
gaccgcgagg cgcagcccgg cagtcggcgg cgcgccgagg gcggagggtg tgcgtgcggtg
60
cgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tggagctcgg gtgccaagggtg
120
cgagccgtca gtccccgggt gcgagtcctt gctgtcttcc acacccttcc tccctccagg
180
ctccttttct acatccttcc cgcgccccca cggttgcgga ccgagcgaga acccccttaa
240
gcaggtgtgg ggggcgtgcg ggggtggcacg agacaaaagg ggacaggggg taagcccggc
300
atggcctccc ggagcctggg gggcctgagc gggatccgcg gcggtggcgg cggaggcggc
360
aagaaaagcc tgagcgcccc caatgctgcg gtggagagga ggaacctgat caccgtgtgc
420
aggtttttctg tgaagacctt gattgatcgg tcttgctttg agacaattga tgattcttct
480

```


115 120 125
 Glu Gly Gln Val Ile Arg Ser Pro Thr Asn Thr Ile Ser Val Tyr Phe
 130 135 140
 Arg Thr Phe Gln Asp Asp Gly Leu Gly Thr Phe Gln Leu His Tyr Gln
 145 150 155 160
 Ala Phe Met Leu Ser Cys Asn Phe Pro Arg Arg Pro Asp Ser Gly Asp
 165 170 175
 Val Thr Val Met Asp Leu His Ser Gly Gly Val Ala His Phe His Cys
 180 185 190
 His Leu Gly Tyr Glu Leu Gln Gly Ala Lys Met Leu Thr Cys Ile Asn
 195 200 205
 Ala Ser Lys Pro His Trp Ser Ser Gln Glu Pro Ile Cys Ser Ala Pro
 210 215 220
 Cys Gly Gly Ala Val His Asn Ala Thr Ile Gly Arg Val Leu Ser Pro
 225 230 235 240
 Ser Tyr Pro Glu Asn Thr Asn Gly Ser Gln Phe Cys Ile Trp Thr Ile
 245 250 255
 Glu Ala Pro Glu Gly Gln Lys Leu His Leu His Phe Glu Arg Leu Leu
 260 265 270
 Leu His Asp Lys Asp Arg Met Thr Val His Ser Gly Gln Thr Asn Lys
 275 280 285
 Ser Ala Leu Leu Tyr Asp Ser Leu Gln Thr Glu Ser Val Pro Phe Glu
 290 295 300
 Gly Leu Leu Ser Glu Gly Asn Thr Ile Arg Ile Glu Phe Thr Ser Asp
 305 310 315 320
 Gln Ala Arg Ala Ala Ser Thr Phe Asn Ile Arg Phe Glu Ala Phe Glu
 325 330 335
 Lys Gly His Cys Tyr Glu Pro Tyr Ile Gln Asn Gly Asn Phe Thr Thr
 340 345 350
 Ser Asp Pro Thr Tyr Asn Ile Gly Thr Ile Val Glu Phe Thr Cys Asp
 355 360 365
 Pro Gly His Ser Leu Glu Gln Gly Pro Ala Ile Ile Glu Cys Ile Asn
 370 375 380
 Val Arg Asp Pro Tyr Trp Asn Asp Thr Glu Pro Leu Cys Arg Ala Met
 385 390 395 400
 Cys Gly Gly Glu Leu Ser Ala Val Ala Gly Val Val Leu Ser Pro Asn
 405 410 415
 Trp Pro Glu Pro Tyr Val Glu Gly Glu Asp Cys Ile Trp Lys Ile His
 420 425 430
 Val Gly Glu Glu Lys Arg Ile Phe Leu Asp Ile Gln Phe Leu Asn Leu
 435 440 445
 Ser Asn Ser Asp Ile Leu Thr Ile Tyr Asp Gly Asp Glu Val Met Pro
 450 455 460
 His Ile Leu Gly Gln Tyr Leu Gly Asn Ser Gly Pro Gln Lys Leu Tyr
 465 470 475 480
 Ser Ser Thr Pro Asp Leu Thr Ile Gln Phe His Ser Asp Pro Ala Gly
 485 490 495
 Leu Ile Phe Gly Lys Gly Gln Gly Phe Ile Met Asn Tyr Ile Glu Val
 500 505 510
 Ser Arg Asn Asp Ser Cys Ser Asp Leu Pro Glu Ile Gln Asn Gly Trp
 515 520 525
 Lys Thr Thr Ser His Thr Glu Leu Val Arg Gly Ala Arg Ile Thr Tyr
 530 535 540
 Gln Cys Asp Pro Gly Tyr Asp Ile Val Gly Ser Asp Thr Leu Thr Cys

gtggggagtg acaccctcac ctgccagtgg gacctcagct ggagcagcga cccccattt
 2460
 tgtgagaaaa ttatgtactg caccgacccc ggagaggtgg atcactcgac ccgcttaatt
 2520
 tcggatcctg tgcgtctggt ggggaccacc atccaataca cctgcaaccc cggttttgtg
 2580
 cttgaaggga gttctcttct gacctgctac agccgtgaaa cagggactcc catctggacg
 2640
 tctcgctgc cccactgcgt ttcggaggag tccctggcat gtgacaaccc agggctgcct
 2700
 gaaaatggat accaaatcct gtacaagcga ctctacctgc caggagagtc cctcaccttc
 2760
 atgtgctacg aaggctttga gctcatgggt gaagtgacca tccgctgcat cctgggacag
 2820
 ccatccact ggaacgggccc cctgcccggtg tgtaaagtta atcaagacag ttttgaacat
 2880
 gctttagaag cagaagcggc agcagagacg tgcgtggaag gggggaacat ggccctggct
 2940
 atcttcatcc cggctctcat catctcctta ctgctgggag gaggctacat ttacatcaca
 3000
 agatgtcgct actattccaa cctccgcctg cctctgatgt actcccaccc ctacagccag
 3060
 atcacctggg aaaccgagtt tgacaacccc atttacgaga cagggggaac ccaaaaggtt
 3120
 tagggtttca tttaaaaaga ggtacccttt aaaaaggggc ttgtgaactc aacccaatt
 3180
 tccccgagac atttatccaa aggccctggg ggccttgatt taaaccccca aaaggcggct
 3240
 gttttttggt taaacttttt aacaaagggt tacgggtttt ttccccggat tttataaatt
 3300
 ttaaaagtg
 3309

<210> 4978

<211> 792

<212> PRT

<213> Homo sapiens

<400> 4978

Met	Ala	Gln	Glu	Ala	Pro	Gln	Glu	Asp	Thr	Ser	Pro	Met	Ala	Leu	Met
1				5					10					15	
Asp	Lys	Gly	Glu	Asn	Glu	Leu	Thr	Gly	Ser	Ala	Ser	Glu	Glu	Ser	Gln
			20					25					30		
Glu	Thr	Thr	Thr	Ser	Thr	Ile	Ile	Thr	Thr	Thr	Val	Ile	Thr	Thr	Glu
			35				40					45			
Gln	Ala	Pro	Ala	Leu	Cys	Ser	Val	Ser	Phe	Ser	Asn	Pro	Glu	Gly	Tyr
	50					55				60					
Ile	Asp	Ser	Ser	Asp	Tyr	Pro	Leu	Leu	Pro	Leu	Asn	Asn	Phe	Leu	Glu
65					70					75				80	
Cys	Thr	Tyr	Asn	Val	Thr	Val	Tyr	Thr	Gly	Tyr	Gly	Val	Glu	Leu	Gln
			85					90					95		
Val	Lys	Ser	Val	Asn	Leu	Ser	Asp	Gly	Glu	Leu	Leu	Ser	Ile	Arg	Gly
			100					105					110		
Val	Asp	Gly	Pro	Thr	Leu	Thr	Val	Leu	Ala	Asn	Gln	Thr	Leu	Leu	Val

atggccctga tggacaaagg tgagaatgag ctgactgggt cagcctcaga ggagagccag
840
gagaccacta cctccaccat tatcaccacc acggtcatca ccaccgagca ggcaccagct
900
ctctgcagtg tgagcttctc caatcctgag gggtagattg actccagcga ctaccactg
960
ctgccccca acaactttct ggagtgcaca tacaacgtga cagtctacac tggctatggg
1020
gtggagctcc aggtgaagag tgtgaacctg tccgatgggg aactgctctc catccgcggg
1080
gtggacggcc ctaccctgac cgtcctggcc aaccagacac tcctgggtga ggggcaggta
1140
atccgaagcc ccaccaacac catctccgtc tacttccgga ccttccagga cgacggcctt
1200
gggaccttcc agcttcaact ccaggccttc atgctgagct gcaactttcc ccgccggcct
1260
gactctgggg atgtcacggt gatggacctg cactcaggtg gggtaggcca ctttactgc
1320
cacctgggct atgagctcca gggcgctaag atgctgacat gcatcaatgc ctccaagccg
1380
cactggagca gccaggagcc catctgctca gctccttggt gaggggcagt gcacaatgcc
1440
accatcggcc gcgtcctctc cccaagttac cctgaaaaca caaatgggag ccaattctgc
1500
atctggacga ttgaagctcc agagggccag aagctgcacc tgcactttga gaggctgttg
1560
ctgcatgaca aggacaggat gacggttcac agcgggcaga ccaacaagtc agctcttctc
1620
tacgactccc ttcaaaccga gagtgtccct tttgagggcc tgctgagcga aggcaacacc
1680
atccgcatcg agttcacgtc cgaccaggcc cgggcggcct ccaccttcaa catccgattt
1740
gaagcgtttg agaaaggcca ctgctatgag ccctacatcc agaatgggaa cttcactaca
1800
tccgaccga cctataacat tgggactata gtggagtcca cctgagacc cggccactcc
1860
ctggagcagg gcccgccat catcgaatgc atcaatgtgc gggaccata ctggaatgac
1920
acagagcccc tgtgcagagc catgtgtggt ggggagctct ctgctgtggc tggggtggta
1980
ttgtcccaa actggccga gccctacgtg gaaggtgaag attgtatctg gaagatccac
2040
gtgggagaag agaaacggat cttcttagat atccagttcc tgaatctgag caacagtgc
2100
atcttgacca tctacgatgg cgacgaggtc atgccccaca tcttggggca gtaccttggg
2160
aacagtggcc ccagaaact gtactcctcc acgccagact taaccatcca gttccattcg
2220
gacctgctg gcctcatctt tggaaagggc cagggattta tcatgaacta catagaggta
2280
tcaaggaatg actcctgctc ggatttaccc gagatccaga atggctggaa aaccacttct
2340
cacacggagt tggtagggg agccagaatc acctaccagt gtgaccccg ctatgacatc
2400

130 135 140
 Leu Ala Ser Ile Leu Glu Glu Leu Met Gly Pro Val Ser Ser Gly Phe
 145 150 155 160
 Ser Glu Val Arg Val Leu Phe Glu Lys Glu Val Asn Glu Val Ser Gln
 165 170 175
 Asn Phe Gln Thr Thr Lys Asp Ser Val Gln Leu Lys Glu His Leu Asp
 180 185 190
 Arg Leu Met Asn Leu Pro Leu His Ser Val Lys Met Glu Pro Cys Tyr
 195 200 205
 Thr Lys Val Asn Leu Leu His Glu Arg Leu Gln Asp Leu Lys Ser Arg
 210 215 220
 Phe Arg Phe Pro His Ile Asp Leu Val Val Gln Arg Thr Gln Asn Tyr
 225 230 235 240
 Met Gln Glu Leu Met Glu Asn Ala Val Phe Thr Phe Glu Gln Leu Leu
 245 250 255
 Ser Pro His Leu Gln Gly Glu Ala Ser Lys Thr Ala Phe Ser Ile Glu
 260 265 270
 Lys Val Lys Leu Arg Val Leu Lys Gln Tyr Asp Tyr Asp Ser Ser Thr
 275 280 285
 Ile Arg Lys Lys Ile Phe Gln Glu Ala Leu
 290 295

<210> 4977

<211> 3309

<212> DNA

<213> Homo sapiens

<400> 4977

nnaaaggaag ggagggaggg agaaaggaga agttggttta gaggccagcc ggacgagctt
 60
 tgggcaccgc ccttaggagg gccaccctca gagtctgaca gcaggtgaag gtcctaaatc
 120
 tccccaaact aactggtgtc ttttctctc ttccaagatg ctcttcccga gggagatgct
 180
 agccctttgg gtccttacct cctgccctca ggagccccgg agagaggcag tcttggcaaa
 240
 gagcaccctg aagagagagt ggtaacagcg cccccagtt cctcacagtc ggcggaagtg
 300
 ctgggcgagc tgggtgctgga tgggaccgca ccctctgcac atcacgacat ccagccctg
 360
 tcaccgtgc ttccagagga ggcccgcctc aagcacgcct tgcccccaa gaagaaactg
 420
 ccttcgtca agcaggtgaa ctctgccagg aagcagctga ggccaaggc cacctcogca
 480
 gccactgtcc aaagggcagg gtcccagcca gcgtcccagg gcctagatct cctctcctcc
 540
 tccacggaga agcctggccc accgggggac ccggacccca tcgtggcctc cgaggaggca
 600
 tcagaagtgc ccctttggct ggaccgaaag gagagtgcgg tccctacaac acccgacccc
 660
 ctgcaaatct ccccttcac ttgcagccc tatgtggccc acacactccc ccagaggcca
 720
 gaacccgggg agcctgggccc tgacatggcc caggaggccc ccaggagga caccagcccc
 780

aggccttttt agaagctgtg caattcttcc gacaggagaa gggtcactat ggttcctggg
 300
 aaatgatcac tggggatgaa atccagatcc tgagtaacct ggtgatggag gagctcctgc
 360
 ccactcttca gacagacctg ctgcctaaga tgaaggggaa gaagaatgac agaaagagga
 420
 cgtggccttg tctcctcgag gaggcctaca ccctgggttca gcatcaagtt tcagaaggat
 480
 taagtgcctt gaaggaggaa tgcagagctc tgacaaaggg cctggaagga acgatccgtt
 540
 ctgacatgga tcagattgtg aactcaaaga actatttaat tggaaagatc aaagcgatgg
 600
 tggcccagcc ggcggagaaa agctgcttgg agagtgtgca gccattcctg gcatccatcc
 660
 tggaggagct catgggacca gtgagctcgg gattcagtga agtacgtgta ctctttgaga
 720
 aagaggtgaa tgaagtcagc cagaacttcc agaccaccaa agacagtgtc cagctaaagg
 780
 agcatctaga ccggttatg aatcttccgc tgcattccgt gaagatggaa ccttggtata
 840
 ctaaagtcaa cctgcttcac gagcgcttgc aggatctcaa gagccgcttc agattcccc
 900
 acattgatct ggtggttcag aggacacaga actacatgca ggagctaata gagaatgcag
 960
 tgttcacttt tgagcagttg ctttccccac atctccaagg agaggcctcc aaaactgc
 1020
 tttccattga gaaggttaaa ctccgagtct taaagcaata tgattatgac agcagcacca
 1080
 tccgaaagaa gatatttcaa gaggcactag t
 1111

<210> 4976

<211> 298

<212> PRT

<213> Homo sapiens

<400> 4976

Met	Lys	Gln	Met	Thr	Phe	Glu	Ala	Gln	Ala	Phe	Leu	Glu	Ala	Val	Gln
1				5				10						15	
Phe	Phe	Arg	Gln	Glu	Lys	Gly	His	Tyr	Gly	Ser	Trp	Glu	Met	Ile	Thr
		20					25						30		
Gly	Asp	Glu	Ile	Gln	Ile	Leu	Ser	Asn	Leu	Val	Met	Glu	Glu	Leu	Leu
		35				40						45			
Pro	Thr	Leu	Gln	Thr	Asp	Leu	Leu	Pro	Lys	Met	Lys	Gly	Lys	Lys	Asn
		50			55					60					
Asp	Arg	Lys	Arg	Thr	Trp	Leu	Gly	Leu	Leu	Glu	Glu	Ala	Tyr	Thr	Leu
65				70				75						80	
Val	Gln	His	Gln	Val	Ser	Glu	Gly	Leu	Ser	Ala	Leu	Lys	Glu	Glu	Cys
		85					90						95		
Arg	Ala	Leu	Thr	Lys	Gly	Leu	Glu	Gly	Thr	Ile	Arg	Ser	Asp	Met	Asp
		100					105						110		
Gln	Ile	Val	Asn	Ser	Lys	Asn	Tyr	Leu	Ile	Gly	Lys	Ile	Lys	Ala	Met
		115				120						125			
Val	Ala	Gln	Pro	Ala	Glu	Lys	Ser	Cys	Leu	Glu	Ser	Val	Gln	Pro	Phe

ttgtctcattg cccttgacc tgtgaggagg ccctcagatt agtaattggt gcttagtact
 3540
 atttatgctt aaatg
 3555

<210> 4974
 <211> 215
 <212> PRT
 <213> Homo sapiens

<400> 4974
 Met Ala Thr Ala Pro Tyr Asn Tyr Ser Tyr Ile Phe Lys Tyr Ile Ile
 1 5 10 15
 Ile Gly Asp Met Gly Val Gly Lys Ser Cys Leu Leu His Gln Phe Thr
 20 25 30
 Glu Lys Lys Phe Met Ala Asp Cys Pro His Thr Ile Gly Val Glu Phe
 35 40 45
 Gly Thr Arg Ile Ile Glu Val Ser Gly Gln Lys Ile Lys Leu Gln Ile
 50 55 60
 Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Ala Val Thr Arg Ser Tyr
 65 70 75 80
 Tyr Arg Gly Ala Ala Gly Ala Leu Met Val Tyr Asp Ile Thr Arg Arg
 85 90 95
 Ser Thr Tyr Asn His Leu Ser Ser Trp Leu Thr Asp Ala Arg Asn Leu
 100 105 110
 Thr Asn Pro Asn Thr Val Ile Ile Leu Ile Gly Asn Lys Ala Asp Leu
 115 120 125
 Glu Ala Gln Arg Asp Val Thr Tyr Glu Glu Ala Lys Gln Phe Ala Glu
 130 135 140
 Glu Asn Gly Leu Leu Phe Leu Glu Ala Ser Ala Lys Thr Gly Glu Asn
 145 150 155 160
 Val Glu Asp Ala Phe Leu Glu Ala Ala Lys Lys Ile Tyr Gln Asn Ile
 165 170 175
 Gln Asp Gly Ser Leu Asp Leu Asn Ala Ala Glu Ser Gly Val Gln His
 180 185 190
 Lys Pro Ser Ala Pro Gln Gly Gly Arg Leu Thr Ser Glu Pro Gln Pro
 195 200 205
 Gln Arg Glu Gly Cys Gly Cys
 210 215

<210> 4975
 <211> 1111
 <212> DNA
 <213> Homo sapiens

<400> 4975
 aatataatct gttgtctgac aggcatttcc cagaccctct tgcctccagt gagaaggaga
 60
 acactcagcc ctttgtgggc ctgccaagg aattcccagt gtacctgtgg cagcccttct
 120
 tcagacacgg ctacttctgc ttccacgagg ctgctgacca gaagaggttt agtgcctcc
 180
 tgagtgactg cgtcaggcat ctcaatcatg attacatgaa gcagatgaca tttgaagccc
 240

tttgactgt tgcttacctg ctgattttct taactgttct tgtgcaatcg acaatgtgct
1920
aacctgcttt tctctttttg taaacgtttt tgcattacag gctgcattct tgccttactg
1980
tatagaaaaa gaaaaaaggc tgggtttact attgcacatt ttaagctttt atacctttat
2040
cttcttgga tggtcagatt ctgaactgga cagtcagaac cacaggctctg ctgttaaggg
2100
attttaaatt gtgcattttt aaccctacag tgaaataact taagatatcc ctgtgttcac
2160
agtgtgagg gctgttttat gtcattgttg cataaattgt tttgtaaaag ggaaagtgtt
2220
tctaaagggtg tttcagcgtg tgtgctgata caaagtaagt tattactttg caccagggtg
2280
tttggccact gaattaatac tgtatagcaa gagaaacaat cttatttttt tggacaacat
2340
gttttattaa gttcttcatt tctgttgatt ttttttattg catttatgat tcagtggctg
2400
ggaattgaga atttatttga aatagaatag gtaacacctc agcgtactat agaaaatgca
2460
ctcagctcaa ctgctgtgtt taaaatacac attttaaate cctctttaca gacactaaca
2520
taaaagtaca tctttctggg ttgtaaacat gtggtagtac cagagtattg tatagtcaat
2580
gttaaataaa agccaaaact ggaatgtgca gaaagtaggc tttggttaat ttgtggatc
2640
atttttattt ttgtctttgt ttaacttttt aaaaaataag atttctggag tagattggta
2700
tattctgtta aagacttaca gtgatccatt ttgcttacac tgttgcatca caagggactc
2760
accagggtg catgacctgc tgggtgtgtg gtatatttac aaaaacaaaa caaacaaacc
2820
accattggg atataaggta gcaatcaca actaaagact gcggcttggt gaggtgcaat
2880
accctgactc ccaaagttag ttacagtggg ttttattgtt tttgtgactg aaggatttat
2940
tcagactgct gtactcttca tttgatgtaa caaatgcta ttaatctaaa tatttgtaaa
3000
taaagtacct gtatctagat taaattaaaa ttgggtgcat tttttctga actataatag
3060
ggtttttctt cagggaaca atttgacgtg tcatcagttt ttattgcagc actgtccata
3120
ttcattgtat aaagagaggt ctacgtatgt agcatataaa accacatcac taagtaatag
3180
accacagct ttattcttgt gtttacatta cccttgaaat gttttcagtc aaccttttc
3240
agtgtaatg cagcacattt ggtggctgat gctgttctcc tttgactgta cggggagcca
3300
gattctatca tatgcatgtg taatccccctg taatacactc aggtgctcac aaatagagca
3360
gattgtcata ttgtaacatg cgtgtgccag acaccgggca gtacactttg gaaagaatgt
3420
gaaatccttt taatttttaa tccatagctt actgcttgtg cagtcacctg cctctcgagg
3480

aagctgcccc gccaccagca acccccagtg gccaccatgg caactgcacc atacaactac
300
tcttacatct ttaaatatat tattattggg gacatgggag taggaaaatc ttgcttgctt
360
catcaattta cagaaaaaaaa atttatggct gattgtcctc acacaattgg tgttgaattt
420
ggtacaagaa taatcgaagt tagtggccaa aaaataaaac tgcagatttg ggatacggca
480
ggacaggagc gatttagggc tggtacacgg agctactaca gaggagctgc gggagctctt
540
atggtctatg atatcactag aagaagtaca tataaccact taagcagctg gttgacagat
600
gcaaggaatc tcaccaatcc aaatactgta ataattctca taggaaataa agcagatttg
660
gaggcacaga gagatgttac atatgaagaa gccaaacagt ttgctgaaga aaatggctta
720
ttgttctctg aagcgagtgc aaaaacggga gagaatgtag aagatgcctt ccttgaggct
780
gccaaagaaa tctatcagaa cattcaggat ggaagcttgg atctgaatgc tgctgagtct
840
ggtgtacaac acaaaccttc agccccgcag ggaggccggc taaccagtga accccaaccc
900
cagagagaag gctgtggctg ctagtgcctt ctttgccttg gccctcatt tgaccttca
960
cctctgtctg ttggaagcag tactttttac tgccctcattg tcttctgtac atcttactgg
1020
gtttaattaa aaaaaagaa aaaactctgt tgtaaaaaca gtttaacaca atactaaact
1080
gctaaacaac tagatgtaat caggttatca aaggcaagta gagtaataaa tctctcctgc
1140
atggtaaatc tagacttttt tcccccttg tctctgtgat aagtatgtca ccaatatatg
1200
atttaaaccg agcactgatg ctggacttca tgatttttac cctcccttg gcaaggcttt
1260
gtctcactgt acggtttaat ttggtgatat ctttaagcctt tcttcccatc cttaactggt
1320
caagtatgtc tgttgtaacc aataagttta ttgctgtgaa attacttctg atggtagaga
1380
aggggttcta taactgcttt tgttttgttt tggataaatt tctgttttg tgggtggcat
1440
ttttcttaac gagatttgct tctgtcttag cctcacacag ggaaaatc catttatctt
1500
ctctctctg cttaattaat agctttatct ttttttatac cattttatcc ttttctctt
1560
aacagaaagt aaatatgtat aaaatttgaa ggaatcgaac taacaatata ttctgtgtat
1620
attattttta tgaagaaaat aaattgatta ctggcatttg aacagtataa aataccagtt
1680
tgtacagtat gacctatag tgacctggt actcccttc atttcacaca aagaaataga
1740
cacaactgca gttcacaagt agtactggct ccacccttg gtgctggcag tgtttgggga
1800
cattatgctg gaaagagctc ctatcatcag aggattaaca ctatcagatt ctgttccatc
1860

				245					250					255	
Thr	Pro	Leu	Gly	Ile	Arg	Pro	Leu	Thr	Lys	Ile	Pro	Pro	Tyr	His	Gly
			260						265				270		
Pro	Tyr	Tyr	Gln	Thr	Leu	Ala	Glu	Ile	Lys	Lys	Gln	Ile	Arg	Gln	Arg
		275					280					285			
Glu	Lys	Tyr	Gly	Pro	Asn	Pro	Lys	Ala	Cys	His	Cys	Lys	Ser	Arg	Gly
	290					295					300				
Phe	Ser	Leu	Glu	Pro	Lys	Glu	Phe	Asp	Lys	Leu	Val	Ala	Leu	Leu	Lys
305					310					315					320
Leu	Thr	Lys	Asp	Pro	Phe	Ile	His	Glu	Ile	Ala	Thr	Met	Ile	Met	Gly
			325					330						335	
Ile	Ser	Pro	Ala	Tyr	Pro	Phe	Thr	Gln	Asp	Ile	Ile	His	Asp	Val	Gly
		340						345					350		
Ile	Thr	Val	Met	Ile	Glu	Asn	Leu	Val	Asn	Asn	Pro	Asn	Val	Lys	Glu
	355					360					365				
His	Pro	Gly	Ala	Leu	Ser	Met	Val	Asp	Asp	Ser	Ser	Glu	Ser	Ser	Glu
	370					375					380				
Glu	Pro	Lys	Ser	Gly	Glu	Ser	Tyr	Ile	His	Gln	Val	Cys	Lys	Gly	Ile
385				390						395					400
Ile	Ser	Cys	Pro	Leu	Asn	Ser	Pro	Val	Gln	Leu	Ala	Gly	Leu	Lys	Leu
			405					410					415		
Leu	Gly	His	Leu	Ser	Ile	Lys	Phe	Glu	Asp	His	Tyr	Val	Ile	Thr	Ser
		420						425				430			
Tyr	Ile	Pro	Asp	Phe	Leu	Thr	Leu	Leu	Asn	Lys	Gly	Ser	Val	Lys	Thr
	435					440					445				
Lys	Phe	Tyr	Val	Leu	Lys	Val	Phe	Ser	Cys	Leu	Ser	Lys	Asn	His	Ala
	450					455					460				
Asn	Thr	Arg	Glu	Leu	Ile	Ser	Ala	Lys	Val	Leu	Ser	Ser	Leu	Val	Ala
465				470						475				480	
Pro	Phe	Asn	Lys	Asn	Glu	Ser	Lys	Ala	Asn	Ile	Leu	Asn	Ile	Ile	Glu
			485					490					495		
Ile	Phe	Glu	Asn	Ile	Asn	Phe	Gln	Phe	Lys	Thr	Lys	Ala	Lys	Leu	Phe
		500						505					510		
Thr	Lys	Glu	Lys	Phe	Thr	Lys	Ser	Glu	Leu	Ile	Ser	Ile	Phe	Gln	Glu
	515					520					525				
Ala	Lys	Gln	Phe	Gly	Gln	Lys	Leu	Gln	Asp	Leu	Ala	Glu	His	Ser	Asp
	530					535					540				
Pro	Glu	Val	Arg	Asp	Lys	Val	Ile	Arg	Leu	Ile	Leu	Lys	Leu		
545				550						555					

<210> 4973

<211> 3555

<212> DNA

<213> Homo sapiens

<400> 4973

gcgagggtga caggaaaccc tgtgcaggga gcgcgcccat cttggaccag cccgaggaag
60atactgaggg agcacaggag cagtcaccgc tgccactgct actgccgcta ctgctgccgg
120cgcgtctgca cctctcggcc tgccagtgtta cctgccggcg cctcgggtcga ccgccccgc
180ccccctcccc gctgcgtccg cactcctgtt cctgggtctg acgccccct cccgccccga
240

ttttattgtg ctatatagta tataaattga gatatttttg gtatttctgc aacgtgacct
 2520
 gataatgaat ctattcatcc tgagtaagct atacttctgt gctttatatt gatatgtgta
 2580
 ttcttttgag attttattta catgttggtta ataaagttgc atgctaaaac tggtgaaaat
 2640
 attgtcctag ttcttcagct gaaatctagt ctggggggat aaagcacaga ggcataaag
 2700
 atgggtgaaga acactgcctg tgtgtctgta gtggggcaca aacaaaacaa gttcacattg
 2760
 acagattatt tagtttcgac atacttaaaa agtagaatca ctctatgcaa gaaggcagga
 2820
 ctgtgctatt agttgtctgt aggctcctac tgatagggt tcaaagagg aatgaagccc
 2880
 tatctgggca gctctgggga agggagtaag gaggaaggga atacagatgc tttcattgt
 2939

<210> 4972

<211> 558

<212> PRT

<213> Homo sapiens

<400> 4972

Met	Val	Asp	Ser	Gly	Thr	Glu	Ala	Arg	Ala	Arg	Gly	Lys	Ala	Glu	Ala
1				5					10				15		
Gly	Leu	Gln	Asp	Gly	Ile	Ser	Gly	Pro	Ala	Thr	Ala	Arg	Val	Asn	Gly
			20					25					30		
Lys	Thr	Gln	Ala	Glu	Ala	Val	Ala	Glu	Ala	Glu	Leu	Lys	Thr	Glu	Ser
		35				40						45			
Val	Thr	Gln	Ala	Lys	Ala	Gly	Asp	Gly	Ala	Met	Thr	Arg	Thr	His	Thr
	50					55					60				
Val	Thr	Tyr	Arg	Glu	Ala	Met	Ala	Val	Thr	Arg	Glu	Val	Ile	Lys	Val
65					70					75				80	
Glu	Asp	Thr	Thr	Lys	Thr	Arg	Val	Met	Val	Glu	Thr	Lys	Thr	Lys	Pro
				85					90					95	
Leu	Ala	Glu	Arg	Ser	Ile	Val	Pro	Gln	Thr	Lys	Ser	Lys	Ala	Met	Pro
				100					105					110	
Met	Ser	Arg	Val	Ser	Thr	Val	Thr	Lys	Ser	Glu	Val	Lys	Val	Val	Ala
		115					120						125		
Val	Ile	Glu	Ala	Asn	Ile	Arg	Ser	Tyr	Ala	Lys	Ser	His	Asp	Lys	Ala
	130					135						140			
Asn	Thr	Gly	Ser	Arg	Pro	Asp	Arg	Arg	Glu	Glu	Thr	Ser	Ile	Gly	Met
145					150					155				160	
Lys	Ser	Ser	Asp	Glu	Asp	Glu	Glu	Asn	Ile	Cys	Ser	Trp	Phe	Trp	Thr
				165					170					175	
Gly	Glu	Glu	Pro	Ser	Val	Gly	Ser	Trp	Phe	Trp	Pro	Glu	Glu	Glu	Thr
				180					185					190	
Ser	Leu	Gln	Val	Tyr	Lys	Pro	Leu	Pro	Lys	Ile	Gln	Glu	Lys	Pro	Lys
		195					200						205		
Pro	Thr	His	Lys	Pro	Thr	Leu	Thr	Ile	Lys	Gln	Lys	Val	Ile	Ala	Trp
	210						215						220		
Ser	Arg	Ala	Arg	Tyr	Ile	Val	Leu	Val	Pro	Val	Glu	Gly	Gly	Glu	Gln
225					230									240	
Ser	Leu	Pro	Pro	Glu	Gly	Asn	Trp	Thr	Leu	Val	Glu	Thr	Leu	Ile	Glu

acaaggggaag tgatcaaggt ggaagataca actaagacta gagtcatggt tgagactaag
900
acaaaacccc tggcagaacg cagtatagtg ccacaaacca agtcaaaggc catgcctatg
960
tctagggtca gtactgtaac caagtctgaa gtcaagggtg ttgctgtcat tgaggcaaat
1020
attaggtcct atgccaagtc acatgataag gccaatactg ggtccagacc tgacagaagg
1080
gaagagacca gcattgggat gaaatccagt gatgaggatg aagaaaatat atgctcctgg
1140
ttctggactg gagaagagcc tagtgtaggg tcctggttct ggctgaaga agagacctct
1200
cttcaagttt ataagcccct acctaagatc caggaaaagc ccaagcccac acacaaaccc
1260
acacttacta taaaacaaaa ggtaatagca tggccaaggg ccagggtatat tgtcctagtt
1320
ccagttgaag gaggggagca atccttgccct ccagaaggaa actggaccct ggttgagacc
1380
ttgattgaaa ctctctggg gattcgacct ttgaccaaga tcccacctta tcatgggcct
1440
tattaccaga ccttagctga gatcaaaaaa cagattaggc aaagggaaaa gtatgggcct
1500
aatccgaagg cctgccactg caaatcacgt ggctttagtt tagagcctaa agagtttgat
1560
aaacttggtg ccctccttaa gttaactaag gatcctttca ttcattgaaat agctacaatg
1620
ataatgggca tcagtcctgc ttatccattt actcaagata taattcatga tgtaggtatt
1680
actgttatga ttgaaaactt ggtcaataat cccaatgta aagaacaccc tggagcttta
1740
agtatggtgg atgacagctc tgagtcttcc gaagaaccaa aatcagggga gtcatatata
1800
catcaagttt gtaaaggcat aatctcttgc ccctgaact ccctgtgca gctggctgga
1860
ctgaaattac tagggcactt gagtataaaa tttgaagatc actatgtgat taccagttat
1920
attccagatt tcctcacctt gttaaacaag ggaagtgtca aaaccaagtt ttatgtttta
1980
aaagtgtttt cgtgtttgtc taaaaatcac gccaatacaa gagaattgat cagtgccaaa
2040
gtactgtcat cattgggtgc accctttaac aagaatgagt caaaggccaa tattcttaat
2100
attattgaaa tatttgagaa tataaatttt cagttcaaaa caaaggcaaa gctatttacc
2160
aaggaaaagt tcaactaaatc tgagcttatt tcaatattcc aggaagcaaa acagtttggt
2220
cagaaactcc aagacttagc agagcacagt gatcccgaag tgagagataa agtcatacga
2280
ttaatactaa aactctgaat acccctctgt tctcataaag cctcaaacag ttttttggag
2340
ttgcaatatg aaaccaatgc atattgtaat tataaattca atacttatgt tttccatgtt
2400
gattgaggga ggcaatttta tggataccaa ttaatcttga gatcctgaac atgtgctgat
2460

1	5	10	15
Ser Ser Leu Pro Thr Leu Thr Thr Ser Val Thr Trp Pro Leu Pro			
20	25	30	
Val Ala Leu Asn Met Val Leu Pro Asp Glu Lys Gly Ala Gly Ala Leu			
35	40	45	
Pro Phe Leu Pro Gly Val Phe Gly Tyr Ala Val Asn Pro Gln Ala Ala			
50	55	60	
Pro Pro Ala Pro Pro Thr Pro Pro Pro Thr Leu Pro Pro Pro Ile			
65	70	75	80
Pro Pro Lys Gly Glu Gly Glu Arg Ala Gly Val Glu Arg Thr Gln Lys			
85	90	95	
Gly Asp Val Gly Xaa Asn Pro Gly Ala Gln Ser Pro Phe His Gln Met			
100	105	110	
Pro Pro Ser Leu Asn Pro Pro Pro Leu Pro Ala Pro Trp Pro Pro Cys			
115	120	125	
Pro Leu Gly Ala Pro Ser His Ser Cys Ala Gly Thr Trp Gly Pro Leu			
130	135	140	
Glu Leu Arg Gly Gln Ala Ala Leu Cys Glu Met			
145	150	155	

<210> 4971

<211> 2939

<212> DNA

<213> Homo sapiens

<400> 4971

gaagaacctc gtctgcggag gaaaaggtag atgttaaattg gtaactacgc gcgaggttct
 60
 gaggagccct gggaacagga aggagaaaag aataccaaaa gtgacaacag ttgccaatc
 120
 gcagtcttta atctgataaa gcggttatct cgtcttgagt ccaggtgcc gactcaatcc
 180
 ccatacacag ccgcccgcct tgcctcgagt ccttggtgtct gactgtctgt tctgtctgt
 240
 gtatgacaca gcacctcgag gcaaggaaat aagaaaactg cctctgatcc aagcagagaa
 300
 ggtagtgag aaggtctgcc ttagatctg ctgtagggtc tgcaccatt ggaagcaagg
 360
 tcttacttca gtggcagatc tgggtggcctt ggagtggctg aagaccacca cctccacag
 420
 ggctggggcc atgcacagcc atccttcctt accttgagtg agcttcctct gcatgttttc
 480
 tatatcactg gcagagcctg tagttggaaa ggggacagag tgactactgg actttgtgtg
 540
 aaaacaccaa ccgggacaaa acttcagtca aggctgagac ggggtgggggt atataacttg
 600
 tctttacgtt aaacttgaa catggttgac tctgggacag aagcaagggc tagaggaaag
 660
 gctgaggctg gctgcaaga tggaatcagt ggtcctgcca ctgctagagt gaatggtaaa
 720
 acccaggccg aggcagtggc tgaggcagaa ctgaaaacag aatcagtgac ccaggccaaa
 780
 gctgggtgatg gagcaatgac caggacacat acagtgacct acagggaggc tatggctgtg
 840

tggtcagggt ccctgtattt ccttccagt ggggagataa atgtttgctc ctaattctct
1620
ttgaaaactg ggccctccctg ctctgtgatt ggataaatat ttcccatccc acccacctcc
1680
ccccaaaaaa tagctcaciaa ggggagagcc agtatggggg agcaaatttg acaaatggga
1740
attagaggag tgcagtttta aaaggaaaag ttgctgtcat caaaatggca gccttttccc
1800
cagctactgt ttttggggcc aagatggctg ccctagcagc aatcactgcc aagggaaga
1860
tcatggcttt tggaggagg tgaatttagg gagggccagg accatcctcc taccctcat
1920
accctcccag catatacaaa aggggagggt ttagacaggc tccctgaatg ttaaccacag
1980
aggagtact ccttcattcc tctctgtct ctttgcactt ttcttggctt tggccacagc
2040
ctgagtgcag aatttcctac tgaatgtacc aagtccaat ttttaagggg gggaaagggt
2100
tcaaattggg aaaaacacac aaaaaaaaaa tcaataaaaa tccccacaaa tcttgtttct
2160
ggcactttag aaaaactgca aaaaaatacg taataaagaa tacatatata tatatctaca
2220
cacaatttat atatctatct atctatacag cggaaccaca agagagactg aggaaggcct
2280
ggaggcaggg gcagaggtga cgacagtgcc cctatatcct taaccatac tctctgagg
2340
caaacaggca tgggaaaatg gaagggttga ggatggaccg gagaattgga acttcagaat
2400
aggtcaaaat tccaaaacca tggacatttt tttttgggag aattgagatt gtagacattt
2460
tttttttctt aaatatgatc aaggaaaata gcttccagaa tgtggtggtt ctgggcaaca
2520
aatgagattg tggcgacgtg gagattaaaa tatatgtatt tgagctgggg aatttgaata
2580
ttgtgagttt cagatgttgg aaatttggga ttttgcagtt ttgtcttttg aaaatgatca
2640
agtcttgtca gtctgtgccc tctttcccca tgttccctgg gaagacgggt ggtggcagag
2700
tgagaaggcc actggttctg tgccgcagca cgaaaattt agaattctac agactagctc
2760
tatacgtagt gaggaccag atttagagaa actgaccaat atttatctcc gcatttgtgt
2820
gtgtgtccaa ctctgtaggc caataaacca acaagacaaa tgaactgtgc tccccaaaaa
2880
aaaaaaaaaa aatgtctaca atctcaattc t
2911

<210> 4970

<211> 155

<212> PRT

<213> Homo sapiens

<400> 4970

Pro Xaa Ser Leu Ser Thr Leu Ser Pro Thr Arg Ser Ser Met Ala Pro

<400> 4969

ccaanntcac tttctaccct gagccctacc cgctcgtcta tggccccccag ctccttgccg
60
cctaccctta caacttcagt aacttgcccg ctcccgggtg ctctcaacat ggtcctacct
120
gatgagaagg gtgcgggggc ccttccttcc ctaccagggg tctttggcta cgcagtgaat
180
cctcaagcag caccctctgc cccaccaaca ccacctcccc caactcttcc tccaccaatt
240
ccccctaagg gagaagggga aagggcaggg gttgagagaa cccagaaggg cgatgtgggg
300
ntgaacctg gggctcaatc cccctttcac cagatgccac cctccctgaa cccccacca
360
ctaccagctc cctggcctcc ctgccccttg ggagccctt cacactcttg tgcagggact
420
tgggggcccc tggagctcag gggtcaggct gctttgtgtg agatgtagtt ttcccatctc
480
ctgggaaggg atctttcgag gttcccctct cagtcttctc ccagggaatg gctccatga
540
ggggcagggc cagcttccat cccttctcca gcccttgggg caactgagca atatacttaa
600
cctgaatctc tactcacagc ccccaccagc tctgaatgtc taacctgtc cctgattcg
660
taaacctagg ggaaaccatc tctctcacct aatgaccgc cttgttctga agctttctct
720
aagcccttcc cagttgcttc ctagcacatt ccattctttg tggcccaggg ctggaccaga
780
ccattgtgat acctgacccc gccacctgg gagtgtggct ttgggtttca tccttcccc
840
gcgtgggtct ctacgtccct gtttcccttg tatcaagaca ccttccctcag ctcccatgcc
900
tttggatctt ccatgttctt ccccatattc ctggacttcg gagatggcct ctcccaagcc
960
aggtaagga ggtttggggg aggggtgccc ctctgcccct ctgttctgtg gctgagcact
1020
ttccagctcc agggcagggg aatattggcc ctatcttgac ccccaaacc agtgagctcc
1080
agattcttcc aaggcaaaag aggtaagcag atcacacctc tttctgcctc tacatatggc
1140
ctattctggg ctagaccaga tttggggggc aggaggggaag aactccatat gggatggaga
1200
agggaatcta ctttctccct gttttttttt cctgatggtt tctcccagac tagaccaaat
1260
agccagaaaa atgatagggg tcggatgggt gggttaagccc aggatttgca catgacctc
1320
catccttacc tgtattccca tctcccagc gtcactcccc tcaccaatca ctccagatgg
1380
ttttggggga accattctac tcttctggtg ggctttgggg tatccccacc aactttccct
1440
tcaaaatagc accttacacc ccatctttga ctcagttccc cacacccaaa gatcccagcc
1500
tagggatggg gtacagggac tttaaatagt ccctaattccc taatttgcac tagttaacct
1560

	165		170		175										
Asp	Leu	Thr	Leu	Ser	Tyr	Leu	Ser	Met	Trp	Leu	His	Gln	Pro	Tyr	Val
	180						185					190			
Glu	Ser	Asp	Ser	Arg	Leu	His	Leu	Glu	Ser	Met	Leu	Leu	Glu	Thr	Gly
	195						200					205			
His	Arg	Ala	Leu												
	210														

<210> 4967
 <211> 550
 <212> DNA
 <213> Homo sapiens

<400> 4967
 nntttgttta tttattcatt tatttgagag accgggtctc actctgtcat ccaggctgga
 60
 atgctgtggc acaattatag ctactgcag cctcgaactc ctggcctcaa gcaatccttc
 120
 cgccttgacc tccaaaatag ctggngttac acgcgtgagc ccccatgccc agcttcccag
 180
 taagacattt attctgagga gttggctcac atgagtaagg aggctgagaa gttccacaat
 240
 ctgaacattc aggagaaagc tggatgatgta atttggtctg agtcccaatg cctgagaacc
 300
 agagaagccg atggtataaa tcccagtgc aaggcaggag aagacccatg tcccagctca
 360
 gaaggcaggc aggaagcaaa aggggcaaat ttctccgtcc tctgcctctt ttttttctat
 420
 tcaggctctc agaggcttgg atgatgtcca ttcacattgg gcagggctag gtacttttct
 480
 gagtcacccg actgaaatac taatctcatc cagaaacacc tgcacagaca cacaaataaa
 540
 tgtttaatct
 550

<210> 4968
 <211> 51
 <212> PRT
 <213> Homo sapiens

Glu	Thr	Gly	Ser	His	Ser	Val	Ile	Gln	Ala	Gly	Met	Leu	Trp	His	Asn
1				5				10					15		
Tyr	Ser	Ser	Leu	Gln	Pro	Arg	Thr	Pro	Gly	Leu	Lys	Gln	Ser	Phe	Arg
			20					25				30			
Leu	Asp	Leu	Gln	Asn	Ser	Trp	Xaa	Tyr	Thr	Arg	Glu	Pro	Pro	Cys	Pro
	35					40					45				
Ala	Ser	Gln													
	50														

<210> 4969
 <211> 2911
 <212> DNA
 <213> Homo sapiens

agacgtggaa ggagccagtg tccgcagccg tctcaggacg tcagagagct cgggtggcctg
 780
 tctccagcag catgctctcc agatgcagcc tactgtcgct ctccacatag ggctgggtgca
 840
 gccacatgga caggtagctc agggtagagt cgggatcccc ggtgtgggca agctccttgg
 900
 ccaccgtgcg cttcaggagc agctccttcc tgtacatctc caagagctta tgcgaaacct
 960
 catagaaatg ggttgtaggc cacgtgtgga acagaggggg tcgtttactc tcttccccat
 1020
 aatggtagtt ttctagttca caaatccct tggtagttga agacagcttt tccattttca
 1080
 cctgtatttt ggtcaaccga tccaagggtg cctgcagttc ctacacagc ttctccagtt
 1140
 cctcggttata ttccagacac accttttctt cattttcctt cgaggctggg ctgctgctgt
 1200
 ctagtcttat ctgtcttta ttcaataaac tgattttcaa gttggcaata ttatttgag
 1260
 tggtaaaacc tgcatacttg agggtttccc acttcaggat taaattgtgc caatcagccg
 1320
 cattgtcctt aatttttctt gcactgacag ataagacagg ttttctgggc gttacagttc
 1380
 caagagtctt tgcttccata aggtccacag atatccgtag aaggagctgc tctgaagcg
 1440
 cacggtggac aggtagctca ggtgaggtc gcga
 1474

<210> 4966

<211> 212

<212> PRT

<213> Homo sapiens

<400> 4966

Met	Glu	Ala	Lys	Thr	Leu	Gly	Thr	Val	Thr	Pro	Arg	Lys	Pro	Val	Leu
1			5						10					15	
Ser	Val	Ser	Ala	Arg	Lys	Ile	Lys	Asp	Asn	Ala	Ala	Asp	Trp	His	Asn
			20					25					30		
Leu	Ile	Leu	Lys	Trp	Glu	Thr	Leu	Asn	Asp	Ala	Gly	Phe	Thr	Thr	Ala
			35				40					45			
Asn	Asn	Ile	Ala	Asn	Leu	Lys	Ile	Ser	Leu	Leu	Asn	Lys	Asp	Lys	Ile
			50			55					60				
Glu	Leu	Asp	Ser	Ser	Ser	Pro	Ala	Ser	Lys	Glu	Asn	Glu	Glu	Lys	Val
65					70				75					80	
Cys	Leu	Glu	Tyr	Asn	Glu	Glu	Leu	Glu	Lys	Leu	Cys	Glu	Glu	Leu	Gln
			85					90						95	
Ala	Thr	Leu	Asp	Gly	Leu	Thr	Lys	Ile	Gln	Val	Lys	Met	Glu	Lys	Leu
			100				105						110		
Ser	Ser	Thr	Thr	Lys	Gly	Ile	Cys	Glu	Leu	Glu	Asn	Tyr	His	Tyr	Gly
			115				120					125			
Glu	Glu	Ser	Lys	Arg	Pro	Pro	Leu	Phe	His	Thr	Trp	Pro	Thr	Thr	His
			130			135					140				
Phe	Tyr	Glu	Val	Ser	His	Lys	Leu	Leu	Glu	Met	Tyr	Arg	Lys	Glu	Leu
145					150				155					160	
Leu	Leu	Lys	Arg	Thr	Val	Ala	Lys	Glu	Leu	Ala	His	Thr	Gly	Asp	Pro

115	120	125
Ser Cys Tyr Glu Gln Arg Asn Phe Ala Thr Ala Met Gln Ile Leu Ser		
130	135	140
Gly Leu Glu His Leu Ala Val Arg Gln Ser Pro Ala Trp Arg Ile Leu		
145	150	155
Pro Ala Lys Ile Ala Glu Val Met Glu Glu Leu Lys Ala Val Glu Val		
165	170	175
Phe Leu Lys Ser Asp Ser Leu Cys Leu Met Glu Gly Arg Arg Phe Arg		
180	185	190
Ala Gln Pro Thr Leu Pro Ser Ala His Leu Leu Ala Met His Ile Gln		
195	200	205
Gln Leu Glu Thr Gly Gly Phe Thr Met Thr Asn Gly Ala His Arg Trp		
210	215	220
Ser Lys Leu Arg Asn Ile Ala Lys Val Val Ser Gln Val His Ala Phe		
225	230	235
Gln Glu Asn Pro Tyr Thr Phe Ser Pro Asp Pro Lys Leu Gln Ser Tyr		
245	250	255
Leu Lys Gln Arg Ile Ala Arg Phe Ser Gly Ala Asp Ile Ser Thr Leu		
260	265	270
Ala Ala Asp Ser Arg Ala Asn Phe His Gln Val Ser Ser Glu Lys His		
275	280	285
Ser Arg Lys Ile Gln Asp Lys Leu Arg Arg Met Lys Ala Thr Phe Gln		
290	295	300

<210> 4965

<211> 1474

<212> DNA

<213> Homo sapiens

<400> 4965

gatttttcat atttccgtgg ctgtttacgg gaagaaggag gccatttcca catgtggaag
60
aaagcattca aaggagcag caggtctctc cccacgcctt gcagagacgg tcaggagaga
120
ccccaagcag agagcacgct gctcagggac agagctgggc ttgtgaccat gtgtcgccct
180
ggcgctgtgc ttccaggtcc tcgcctggag ggcagctgta ttctcagaga gccagccttt
240
cctacagccc ttttagtgac caggggcatt tctaccctc acttgatctc aaagccacgg
300
tcggtaggaa caaaaagggtg ggttttctag caggctggaa atggccagca ggggagcaag
360
ccgcggctgc ctgggagtgt cgggtgggtca ggtcaggctg tagatgtatc ctgtagactc
420
aaggccgctt ctcaggagtc cagagtccca taaaccacca tgagtgcctt cctgggatct
480
cattctgctc agaaactcat tgattttact ctgaagcacc cacgaatgac agattcccag
540
gagggggcaga gaaggctgag cggcaccacg tggggctggc cgcgggttgt gggcatgagc
600
acgcctggag aggccatggg gctggtgaca agctctggcc agaagacccc aagaaggtct
660
gatcctgggg tctgatccag gcctgcggca ctgggtccta ggcagactgt ctgcctggtg
720

gccacaggt ggagcaagct caggaacatc gcaaagggtg tgagccaggt gcacgcgttc
 720
 caggagaacc cttacacctt cagccccgac cccaagctcc agtcgtacct caagcagagg
 780
 attgcccgtc tcagcgggtc cgacatttcc aactcgcgcg cagatagcag ggccaacttc
 840
 caccaggtct ccagcgagaa gcactcacgg aagattcagg acaagctacg gaggatgaag
 900
 gctacattcc agtagccgag ctcgggcctg gtgtggaatt ccagatccga atccgactgt
 960
 gggggggcggg ctgggagggtg ggagccgcgt ctcaggcccg gccgttatca aggccctccc
 1020
 gccccgaac cctggggagc tggaccagga ggtggaggct caggggaccc catggggaca
 1080
 ggcagagctg gtctcctccc agcagacgga gccaggacgg gcacaagagt cttggagggt
 1140
 tgcgtgtttc tgctagaatt aaaaagttaa atttaaaaat gaaaatgaaa gacagcttcc
 1200
 caggagtttt gtgcctgtct gcgcctctca cacacagata agtggctctt acccagctct
 1260
 cagtgactcc cccacaaaac agcaacagcc tccaccgcca actcaacaaa cttcagagta
 1320
 gctcctccct gagcaggttt ctgagccagc ctcggttggc tgagcaacga agggccaaag
 1380
 ctgacctctg agtggccaac tgcagctccc agggactccg agacctccgg tccgagaccc
 1440
 tgctgggtt cccccccac aaccagacc cagaaccgct ctccccttcc ctgcccagtg
 1500
 cccctcttcc ccagcccaga ccccagggtg cccaaggcct gctgctggag caggcacctt
 1560
 gggctggggc tgctc
 1575

<210> 4964

<211> 304

<212> PRT

<213> Homo sapiens

<400> 4964

Leu	Glu	Asp	Phe	Tyr	Gly	Pro	Cys	Ala	Lys	Thr	Ser	Glu	Lys	Gly	Pro
1				5					10					15	
Tyr	Phe	Leu	Thr	Glu	Tyr	Ser	Thr	His	Gln	Leu	Phe	Ser	Gln	Leu	Thr
		20						25					30		
Leu	Leu	Gln	Gln	Glu	Leu	Phe	Gln	Lys	Cys	His	Pro	Val	His	Phe	Leu
		35					40					45			
Asn	Ser	Arg	Ala	Leu	Gly	Val	Met	Asp	Lys	Ser	Thr	Ala	Ile	Pro	Lys
	50					55					60				
Ala	Ser	Ser	Ser	Glu	Ser	Leu	Ser	Ala	Lys	Thr	Cys	Ser	Leu	Phe	Leu
65				70					75					80	
Pro	Asn	Tyr	Val	Gln	Asp	Lys	Tyr	Leu	Leu	Gln	Leu	Leu	Arg	Asn	Ala
			85					90					95		
Asp	Asp	Val	Ser	Thr	Trp	Val	Ala	Ala	Glu	Ile	Val	Thr	Ser	His	Thr
		100					105						110		
Ser	Lys	Leu	Gln	Val	Asn	Leu	Leu	Ser	Lys	Phe	Xaa	Leu	Ile	Ala	Lys

865 870 875 880
 Thr Ala Leu Leu Val Ala Gly Ser Arg Leu Trp Val Gly Thr Gly Asn
 885 890 895
 Gly Val Val Ile Ser Ile Pro Leu Thr Glu Thr Val Val Leu His Arg
 900 905 910
 Gly Gln Leu Leu Gly Leu Arg Ala Asn Lys Thr Ser Pro Thr Ser Gly
 915 920 925
 Glu Gly Ala Arg Pro Gly Gly Ile Ile His Val Tyr Gly Asp Asp Ser
 930 935 940
 Ser Asp Arg Ala Ala Ser Ser Phe Ile Pro Tyr Cys Ser Met Ala Gln
 945 950 955 960
 Ala Gln Leu Cys Phe His Gly His Arg Asp Ala Val Lys Phe Phe Val
 965 970 975
 Ser Val Pro Gly Asn Val Leu Ala Thr Leu Asn Gly Ser Val Leu Asp
 980 985 990
 Ser Pro Ala Glu Gly Pro Gly Pro Ala Ala Pro Ala Ser Glu Val Glu
 995 1000 1005
 Gly Gln Lys Leu Arg Asn Val Leu Val Leu Ser Gly Gly Glu Gly Tyr
 1010 1015 1020
 Ile Asp Phe Arg Ile Gly Asp Gly Glu Asp Asp Glu Thr Glu Glu Gly
 1025 1030 1035 1040
 Ala Gly Asp Met Ser Gln Val Lys Pro Val Leu Ser Lys Ala Glu Arg
 1045 1050 1055
 Ser His Ile Ile Val Trp Gln Val Ser Tyr Thr Pro Glu
 1060 1065

<210> 4963

<211> 1575

<212> DNA

<213> Homo sapiens

<400> 4963

ctcgaggact tctacggccc ctgcgccaag accagtgaga aggggcccta cttcctgacg
 60
 gagtacagca ctcaccagct cttcagccag ctcacgctgc tacagcagga gttgtttcaa
 120
 aagtgccacc cgggtccactt cctgaactca cgggccctgg gcgtcatgga caagagcact
 180
 gccatcccca aagccagctc ttctgagtct ctttcggcca aaacctgcag cttatttctg
 240
 cccaattacg ttcaggacaa gtatctgtta cagcttctaa gaaacgcaga tgacgtcagc
 300
 acctgggtgg ctgcagagat tgtgaccagc cacacctcca agctgcaggt gaacttgctg
 360
 tccaaatttn tgctgattgc aaaatcttgc tatgagcaga gaaacttcgc gacagccatg
 420
 cagatcctga gcgggctgga gcacctggcc gtgaggcagt cccctgcctg gagaattctg
 480
 cctgcaaaga tagcagaggt catggaggag ctgaaagccg tggaggtctt cctgaagagc
 540
 gacagcctgt gtctgatgga agggcgggcg ttccggggcg agcccaccct gccctcggcc
 600
 cacctcctgg ccatgcacat ccagcagctg gagacaggcg gcttcacat gaccaacggg
 660

435 440 445
 Ser Gly Trp Arg Pro Asn Glu Asp Asp Ala Gly Asn Gly Val Lys Pro
 450 455 460
 Ala Pro Gly Arg Asp Pro Leu Thr Cys Asp Arg Glu Gly Asp Gly Glu
 465 470 475 480
 Pro Lys Ser Ala His Ala Ser Pro Glu Lys Lys Lys Ala Lys Glu Leu
 485 490 495
 Pro Glu Met Asp Ala Thr Ser Ser Arg Val Trp Ile Leu Thr Ser Thr
 500 505 510
 Leu Thr Thr Ser Lys Val Val Ile Ile Asp Ala Asn Gln Pro Gly Thr
 515 520 525
 Val Val Asp Gln Phe Thr Val Cys Asn Ala His Val Leu Cys Ile Ser
 530 535 540
 Ser Ile Pro Ala Ala Ser Asp Ser Asp Tyr Pro Pro Gly Glu Met Phe
 545 550 555 560
 Leu Asp Ser Asp Val Asn Pro Glu Asp Pro Gly Ala Asp Gly Val Leu
 565 570 575
 Ala Gly Ile Thr Leu Val Gly Cys Ala Thr Arg Cys Asn Val Pro Arg
 580 585 590
 Ser Asn Cys Ser Ser Arg Gly Asp Thr Pro Val Leu Asp Lys Gly Gln
 595 600 605
 Gly Glu Val Ala Thr Ile Ala Asn Gly Lys Val Asn Pro Ser Gln Ser
 610 615 620
 Thr Glu Glu Ala Thr Glu Ala Thr Glu Val Pro Asp Pro Gly Pro Ser
 625 630 635 640
 Glu Pro Glu Thr Ala Thr Leu Arg Pro Gly Pro Leu Thr Glu His Val
 645 650 655
 Phe Thr Asp Pro Ala Pro Thr Pro Ser Ser Gly Pro Gln Pro Gly Ser
 660 665 670
 Glu Asn Gly Pro Glu Pro Asp Ser Ser Ser Thr Arg Pro Glu Pro Glu
 675 680 685
 Pro Ser Gly Asp Pro Thr Gly Ala Gly Ser Ser Ala Ala Pro Thr Met
 690 695 700
 Trp Leu Gly Ala Gln Asn Gly Trp Leu Tyr Val His Ser Ala Val Ala
 705 710 715 720
 Asn Trp Lys Lys Cys Leu His Ser Ile Lys Leu Lys Asp Ser Val Leu
 725 730 735
 Ser Leu Val His Val Lys Gly Arg Val Leu Val Ala Leu Ala Asp Gly
 740 745 750
 Thr Leu Ala Ile Phe His Arg Gly Glu Asp Gly Gln Trp Asp Leu Ser
 755 760 765
 Asn Tyr His Leu Met Asp Leu Gly His Pro His His Ser Ile Arg Cys
 770 775 780
 Met Ala Val Val Tyr Asp Arg Val Trp Cys Gly Tyr Lys Asn Lys Val
 785 790 795 800
 His Val Ile Gln Pro Lys Thr Met Gln Ile Glu Lys Ser Phe Asp Ala
 805 810 815
 His Pro Arg Arg Glu Ser Gln Val Arg Gln Leu Ala Trp Ile Gly Asp
 820 825 830
 Gly Val Trp Val Ser Ile Arg Leu Asp Ser Thr Leu Arg Leu Tyr His
 835 840 845
 Ala His Thr His Gln His Leu Gln Asp Val Asp Ile Glu Pro Tyr Val
 850 855 860
 Ser Lys Met Leu Gly Thr Gly Lys Leu Gly Phe Ser Phe Val Arg Ile

1	5	10	15
Ser Ser Val Pro Ser Ala Ala Val Thr Pro Leu Asn Glu Ser Leu Gln			
20	25	30	
Pro Leu Gly Asp Tyr Gly Val Gly Ser Lys Asn Ser Lys Arg Ala Arg			
35	40	45	
Glu Lys Arg Asp Ser Arg Asn Met Glu Val Gln Val Thr Gln Glu Met			
50	55	60	
Arg Asn Val Ser Ile Gly Met Gly Ser Ser Asp Glu Trp Ser Asp Val			
65	70	75	80
Gln Asp Ile Ile Asp Ser Thr Pro Glu Leu Asp Met Cys Pro Glu Thr			
85	90	95	
Arg Leu Asp Arg Thr Gly Ser Ser Pro Thr Gln Gly Ile Val Asn Lys			
100	105	110	
Ala Phe Gly Ile Asn Thr Asp Ser Leu Tyr His Glu Leu Ser Thr Ala			
115	120	125	
Gly Ser Glu Val Ile Gly Asp Val Asp Glu Gly Ala Asp Leu Leu Gly			
130	135	140	
Glu Phe Ser Gly Met Gly Lys Glu Val Gly Asn Leu Leu Leu Glu Asn			
145	150	155	160
Ser Gln Leu Leu Glu Thr Lys Asn Ala Leu Asn Val Val Lys Asn Asp			
165	170	175	
Leu Ile Ala Lys Val Asp Gln Leu Ser Gly Glu Gln Glu Val Leu Arg			
180	185	190	
Gly Glu Leu Glu Ala Ala Lys Gln Ala Lys Val Lys Leu Glu Asn Arg			
195	200	205	
Ile Lys Glu Leu Glu Glu Glu Leu Lys Arg Val Lys Ser Glu Ala Ile			
210	215	220	
Ile Ala Arg Arg Glu Pro Lys Glu Glu Ala Glu Asp Val Ser Ser Tyr			
225	230	235	240
Leu Cys Thr Glu Ser Asp Lys Ile Pro Met Ala Gln Arg Arg Arg Phe			
245	250	255	
Thr Arg Val Glu Met Ala Arg Val Leu Met Glu Arg Asn Gln Tyr Lys			
260	265	270	
Glu Arg Leu Met Glu Leu Gln Glu Ala Val Arg Trp Thr Glu Met Ile			
275	280	285	
Arg Ala Ser Arg Glu His Pro Ser Val Gln Glu Lys Lys Lys Ser Thr			
290	295	300	
Ile Trp Gln Phe Phe Ser Arg Leu Phe Ser Ser Ser Ser Ser Pro Pro			
305	310	315	320
Pro Ala Lys Arg Pro Tyr Pro Ser Val Asn Ile His Tyr Lys Ser Pro			
325	330	335	
Thr Thr Ala Gly Phe Ser Gln Arg Arg Asn His Ala Met Cys Pro Ile			
340	345	350	
Ser Ala Gly Ser Arg Pro Leu Glu Phe Phe Pro Asp Asp Asp Cys Thr			
355	360	365	
Ser Ser Ala Arg Arg Glu Gln Lys Arg Glu Gln Tyr Arg Gln Val Arg			
370	375	380	
Glu His Val Arg Asn Asp Asp Gly Arg Leu Gln Ala Cys Gly Trp Ser			
385	390	395	400
Leu Pro Ala Lys Tyr Lys Gln Leu Ser Pro Asn Gly Gly Gln Glu Asp			
405	410	415	
Thr Arg Met Lys Asn Val Pro Val Pro Val Tyr Cys Arg Pro Leu Val			
420	425	430	
Glu Lys Asp Pro Thr Met Lys Leu Trp Cys Ala Ala Gly Val Asn Leu			

gggagtgcgg ggatgcggat cagctgggag gaggagggga ggggtgcttc caccgaggg
 3420
 gaagatgctc tcgggacagt ttcccgggca gctcctggcc agcttcacgc ccagagtcct
 3480
 caagtccagg gcaccttggg ccacgcgcag gcagaatccg aggtggtcct ggctctaccc
 3540
 tgggcctcct actccccagc acccctggag gaggcagggg ctccccgccc ccgaggtgc
 3600
 ctgccctggg ccacactccg catgctgctc atggggccac cctgcctcct gggccctcac
 3660
 tctgcctagg ggagctgggc caggcactag cctttgccc gggaggtggg cctcaggtg
 3720
 ccaggtgcc tgcaccccag ccggccttct ctggggcctc cccgtcgtca agcctctatc
 3780
 ctgtctgtcc ccaccccagc tgtccctgc ccagggaact ggcataaaag cagaggccc
 3840
 ggctccctgg ggcagctgct tgagaacaga gactgctacc ccctcctgcc catgcaggca
 3900
 ggctcttgcc agccccgttc tgacctgtgt cccccaggc tctgcctggg cagaagactc
 3960
 accttgagg agtgggccc ggagtctgt cctcccaga agccccagg gtgggatttc
 4020
 tcaggctgcc agggcaggcc caggcctcag gaagaagggg agggccctgg cctctccggg
 4080
 atcagtccta ggacacaggc tcagcctcag gttgatggg gatgatgtgc tcccggggcc
 4140
 tgctcctgc acggggctcc acggagccca gctcccagac acgctactaa gtgcctaggg
 4200
 ttgcccgtg tggcctgctc ccaggagca acagagaggc caccaagcag agggccgtg
 4260
 ggctgaggat ggagccgccc ccagccgact ccaagccgc agagggcaga cggcacctg
 4320
 gactgctctc cctgccacg tgggcctctc tggcctattc ctaccttcca ggccactgc
 4380
 actcctgtct gggaggccct tatgagggca gccagcccc cgcacccacc cccaaccaga
 4440
 gaagcacaga tcttggggag ctgcccaca agccccgtg gccaccgagg gctgcagccg
 4500
 ctgcgtgcc ggcttctccc caccacctg ccacctccac tgtgatgtat gtccgtccc
 4560
 tcgtctgtc cccaggatc tcgaagtgc tccgggctga gcagtggggc ggctggggga
 4620
 ggggtgacga ttctcctcag gctttggccc tgcaagcaaa cccacatata tgctctgtat
 4680
 gtaataaatg tcttaacgtc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
 4737

<210> 4962

<211> 1069

<212> PRT

<213> Homo sapiens

<400> 4962

Ala Ala Ala Thr Pro Ser Thr Thr Gly Thr Lys Ser Asn Thr Pro Thr

ctggtgggct gtgccaccgc ctgcaacgtg ccgcggagca actgctcctc ccgaggggac
1800
acccagtgct tagacaaggg gcagggggag gtggccacca tcgccaacgg gaaggtcaac
1860
ccgtcccagt ccacagagga ggccacagag gccacggagg tgccagaccc tgggcccagc
1920
gagccagaga cagccacatt gcggcccggg cctctcacag agcacgtctt cactgaccca
1980
gccccgaccc cgtcctctgg cccccagcct ggcagcgaga acggggccaga gcctgacagc
2040
agcagcacac ggccagagcc agagcccagc ggggacccca cgggagcagg cagcagtgtc
2100
gcacccacca tgtggctggg agcccagaac ggctggctct atgtgcactc ggctgtggcc
2160
aactggaaga agtgcttgc ctccatcaag ctgaaggatt ctgtgctgag cctggtgcat
2220
gtcaaaggcc gtgtgctggt ggctctggcg gacgggaccc tggccatctt ccaccgtggt
2280
gaagatggcc agtgggatct gagcaactat cacctaattg acctgggcca cccgcaccac
2340
tccatccgct gcatggctgt tgtgtacgac cgcgtgtggt gtggctacaa gaacaagggtg
2400
cacgtcatcc agcccagac catgcagata gagaagtcac ttgacgcca cccgcggcgg
2460
gagagccagg tgcggcagct ggcgtggatc ggcgatggcg tatgggtgtc catccgcctg
2520
gactccaccc tgaggctcta ccatgcacac acgcaccagc atctacagga cgtggacatt
2580
gagccctaag tcagcaagat gctaggcact ggcaagctgg gtttctcctt cgtacgcac
2640
acggccctgc ttgtcgcggg cagccggctc tgggtgggca ccggcaacgg agtggtcac
2700
tccatcccc tgacagagac tgtggtcctg caccgaggcc agctcctggg gctccgagcc
2760
aataagacat cccccacctc tggggagggc gcccgctccg ggggcatcat ccacgtgtat
2820
ggcgatgaca gcagtgcag ggcgggccag agcttcatcc cctactgtc catggcccag
2880
gccagctat gcttccatgg gcaccgcgat gccgtgaagt tctttgtctc ggtgccaggg
2940
aacgtgctgg ccaccctgaa tggcagtgtg ctggacagcc cagccgaggg ccctgggcca
3000
gctgcccctg cctcgaggt cgagggccag aagctgcgga acgtgctggt gctgagcggc
3060
ggggagggct acatcgactt ccgcattgga gacggagagg acgacgagac ggaggagggc
3120
gcaggggaca tgagccaggt gaagcccgtg ctgtccaagg cagagcgagc tcacatcacc
3180
gtgtggcagg tgtcctacac ccccgagtga agctgctgcc ctgctgggcc cgacctgtac
3240
ataggacccc cgaccacctg acccccgcgc ggcccgcggg gtagccagcc aggcgcgcgc
3300
gccctctctc taacctctca acctgcagct ttcacctgag tctggccctt ccagcgggca
3360

tccaagaaca gcaagcgtgc ccgggagaag cgcgacagcc gcaacatgga agtacaggtc
180
acccaggaga tgcgcaacgt cagtataggg atgggcagca gtgacgagtg gtctgatgtt
240
caagacatta ttgactccac gccagagctg gacatgtgtc cagagacccg cctggaccgc
300
acaggaagca gccaaccca gggcatcgtg aacaaagctt tcggcatcaa caccgactcc
360
ctgtaccatg agctgtcgac ggcagggtct gaggtcatcg gggatgtgga cgaaggggccc
420
gacctcctag gggagttctc aggaatgggc aaagaagtgg ggaatctgct actggaaaac
480
tcacagcttc tggaaaccaa aaacgccttg aatgtggtga agaatacct gattgccaaag
540
gtcgaccagc tgtccgggga gcaggaggtg ctgaggggag agttggaggc tgctaagcag
600
gccaaagtca agctggaaaa ccgtatcaag gagctggaag aggaactgaa aagagtgaag
660
tccgaggcca tcacgccccg ccgtgaaccc aaagaagagg cggaggatgt aagcagctat
720
ctctgtacag aatcggacaa aatccccatg gccagcgcc gccgcttcac gcgggtggag
780
atggccccgtg tgctcatgga gcggaaccag tacaaggagc ggctgatgga gctgcaggag
840
gctgtgcggt ggactgagat gatcagagcg tcccagagag acccatccgt ccaggagaag
900
aagaagtcca ccacttgga gttcttcagc cgcctcttca gctcttctc cagccccct
960
ccggccaagc gccctatcc ctccgtgaac atccactaca agtcacccac cactgccggc
1020
ttcagccagc gccgcaacca tgccatgtgc ccgatctcgg caggcagccg gccctggaa
1080
ttcttcctg acgacgactg cagctctcc gcccgtcgag agcagaagcg cgagcagtac
1140
cgccagggtg gtgagcacgt gcgtaacgac gacggccgtc tgcaggcctg cggctggagc
1200
ctgcccccca agtacaagca gctgagtcac aacgggggccc aggaggacac gcggatgaag
1260
aacgtgccgg tgccgggtgta ctgccgccct ctggtggaga aggacccac catgaagctg
1320
tggtgtgccg cgggcgtcaa cctgagcggg tggaggccca atgaggacga cgctgggaat
1380
ggagtcaagc cagcgccagg ccgcgatccc ctgacctgag accgcgaagg agacggcgag
1440
cccaagagcg ccacgcgtc tcccgagaag aagaaggcca aggagctccc tgaaatggac
1500
gccacctcca gccgggtgtg gatcctgacc agcaccctga ccaccagcaa ggtggtgatc
1560
atcgacgcca accagccggg cagcgtggtg gaccagttca ccgtctgcaa cgcgcacgtg
1620
ctgtgcatct ccagcatccc cgcggccagc gacagcgact accctcccgg ggagatgttc
1680
ctggacagcg acgtgaaccc agaggacccg ggcgcagatg gcgtgctggc cggtatcacc
1740

<212> DNA

<213> Homo sapiens

<400> 4959

acgcgtgtca aggctgggaa tgcaaattggt agtgggtggtt tcctttgctg ggggttgatg
 60
 cagtgggttg gggggcttcc atttgcagtt gagggccagg tgtttgggtc cttccatgtg
 120
 gcagggataa agaggagagc tggcatctgg agtcatgatac tgtctgagag gcagtgcctc
 180
 cggccaccgt aggatggagg ccagcttcca gccctggctg atgggggaga agcagcgaat
 240
 tctccagatg tggtatggca gacctttgga agattcactc ggcctccact taaccttggtg
 300
 agaccaaagg ccacagcccc atgtgttctg cgtgctgttg aacatgtttg tatttcattg
 360
 gcgtggatga taatttggtt gaaaggagag atggtcacca gtggactcag tttaggaagg
 420
 cacaaaggtc aaccctttcc gtttctaga
 449

<210> 4960

<211> 115

<212> PRT

<213> Homo sapiens

<400> 4960

Met	Phe	Asn	Ser	Thr	Gln	Asn	Thr	Trp	Gly	Cys	Gly	Leu	Trp	Ser	His
1				5					10					15	
Lys	Val	Lys	Trp	Arg	Pro	Ser	Glu	Ser	Ser	Lys	Gly	Leu	Pro	Tyr	His
			20					25					30		
Ile	Trp	Arg	Ile	Arg	Cys	Phe	Ser	Pro	Ile	Ser	Gln	Gly	Trp	Lys	Leu
		35					40					45			
Ala	Ser	Ile	Leu	Arg	Trp	Pro	Glu	Ala	Leu	Pro	Leu	Arg	Gln	Ile	Met
		50				55				60					
Thr	Pro	Asp	Ala	Ser	Ser	Pro	Leu	Tyr	Pro	Cys	His	Met	Glu	Gly	Pro
65				70						75				80	
Lys	His	Leu	Ala	Leu	Asn	Cys	Lys	Trp	Lys	Pro	Pro	Gln	Pro	Leu	His
			85						90					95	
Gln	Pro	Pro	Ala	Lys	Glu	Thr	Thr	Thr	Thr	Ile	Cys	Ile	Pro	Ser	Leu
			100					105					110		
Asp	Thr	Arg													
		115													

<210> 4961

<211> 4737

<212> DNA

<213> Homo sapiens

<400> 4961

gcggccgccca caccagcac cacaggcacc aagtccaaca cgccacatc ctccgtgcc
 60
 tcggccgccg tcacaccct caacgagagc ctgcagcccc tgggggacta tggcgtgggc
 120

<210> 4957
 <211> 872
 <212> DNA
 <213> Homo sapiens

<400> 4957
 ntccatattt tttttttttt ttggacacaa catgatatta ggctttattt gaatttaaaa
 60
 tcttgattcc atccaggac attttttacc gaagcgtctc agagactggc tcagggtatt
 120
 tcttgacaag actgtacagg gcttctcatc atacacaaac cctccacagc ccacggctcc
 180
 aacccacagc acctcctgca gtccctggagg gaaaaggac agtaacatga agtgtctgaa
 240
 gatccatttc acctcttttc catgtgaatc atgacgcttt caatgcattt cttgacagga
 300
 ttctattttg aaagaatgat gctcaatctg taccttttat gcttcttggt tcttctccat
 360
 caataatatg tcagtcaact gcttgtcaga gacacttagc tgctgacagg tcttcataac
 420
 ctgactcagg taaactgcca agagatgctt gcacaggatg ctgtcactct tccgtagcac
 480
 tgagaatgca aatgcaggac atgaacagta atgacaagaa gccaaacatg tgtatgtttt
 540
 actggaactt ccaaggacct ggtaaacacg ccttccactg ggtgatgaga ttaagggtgat
 600
 ggactgtcga tcaactaggt ccaaggcctg ggtggctgat gagccaaaga gaaacttcag
 660
 cgataacaga tattcatcag gaattcggctc ccgtacttcg cgcgctctcc tgcaccgccg
 720
 ccgccatctc gctcaggagc tctccacaa ccgccggcaa ctacggccat cgcgccgcag
 780
 gacacgcctt ccacgacgag gaccgcgcga cgctccagct gactgagcct acctgtggag
 840
 gatcctgacc cccgcgcggc ctggttcga at
 872

<210> 4958
 <211> 51
 <212> PRT
 <213> Homo sapiens

<400> 4958
 Gln Ile Phe Ile Arg Asn Ser Val Pro Tyr Phe Ala Arg Ser Pro Ala
 1 5 10 15
 Pro Pro Pro Pro Ser Arg Ser Gly Ala Pro Pro Gln Pro Pro Ala Thr
 20 25 30
 Thr Ala Ile Ala Pro Gln Asp Thr Pro Ser Thr Thr Arg Thr Ala Arg
 35 40 45
 Arg Ser Ser
 50

<210> 4959
 <211> 449

```

      50              55              60
Trp Asn Gln Leu Val Thr Ala Ala Gly Pro Ser Arg Pro Ile Trp Ile
65              70              75              80
Asp Pro Leu Gly Thr His Cys Thr Arg Glu Pro Gln Met Gln Leu Ser
      85              90              95
Ser Met Gly Gly Ala Leu Ser Ala Gly Gly Val Trp Asp Arg Arg Arg
      100              105              110
Glu Ala

```

<210> 4955

<211> 364

<212> DNA

<213> Homo sapiens

<400> 4955

```

agatctaagg ccctcgggag agatgggaac tgagcacctg ggtcttagac cggaggagca
60
aactgcaaga caggggtggcc ggggacacca gcctccgccc ttctgtgaca taaggacaag
120
agctcagcct gcccgaggaa aactctgggc aagagatgtg gaaagaaaga gctcangggg
180
gggcacgcat ggcacccctg ggggacatct gagggcaccc ccaccacta ttcctccctc
240
caaggtggcc tctgagtgtg aaggcagggg gaagcagaca cctgccccctc actctccctc
300
cctaccacat agctaccggg tggggggcgt ccctgggatg attcctgagg gcaggatcca
360
gggg
364

```

<210> 4956

<211> 114

<212> PRT

<213> Homo sapiens

<400> 4956

```

Met Gly Thr Glu His Leu Gly Leu Arg Pro Glu Glu Gln Thr Ala Arg
  1              5              10              15
Gln Gly Gly Arg Gly His Gln Pro Pro Pro Phe Cys Asp Ile Arg Thr
      20              25              30
Arg Ala Gln Pro Ala Gln Glu Gln Leu Trp Ala Arg Asp Val Glu Arg
      35              40              45
Lys Ser Ser Xaa Gly Gly Thr His Gly Ile Leu Gly Gly His Leu Arg
      50              55              60
Ala Pro Pro Pro Thr Ile Pro Pro Ser Lys Val Ala Ser Glu Cys Glu
      65              70              75              80
Gly Arg Gly Lys Gln Thr Pro Ala Pro His Ser Pro Ser Leu Pro His
      85              90              95
Ser Tyr Arg Val Gly Gly Val Pro Gly Met Ile Pro Glu Gly Arg Ile
      100              105              110
Gln Gly

```

145 150 155 160
 Leu Glu Glu Glu Gln Lys Leu Val Gln Leu Gly Gln Ala Glu Lys Arg
 165 170 175
 Lys Thr Asp Gln Phe Leu Arg Asp Ala Val Glu Thr Arg Leu Arg Met
 180 185 190
 Leu Ile Pro Tyr Ile Glu His Trp Pro Arg Ala Leu Ser Ile Leu Met
 195 200 205
 Leu Pro His Asn Ile Pro Ser Ser Leu Ser Leu Leu Thr Ser Met Val
 210 215 220
 Asp Asp Met Trp His Tyr Ala Gly Asp Gln Ser Thr Asp Phe Asn Trp
 225 230 235 240
 Tyr Thr Arg Arg Ala Met Leu Ala Ala Ile Tyr Asn Thr Thr Glu Leu
 245 250 255
 Val Met Met Gln Asp Ser Ser Pro Asp Phe Glu Asp Thr Trp Arg Phe
 260 265 270
 Leu Glu Asn Arg Val Asn Asp Ala Met Asn Met Gly His Thr Ala Lys
 275 280 285
 Gln Val Lys Ser Thr Gly Glu Ala Leu Val Gln Gly Leu Met Gly Ala
 290 295 300
 Ala Val Thr Leu Lys Asn Leu Thr Gly Leu Asn Gln Arg Arg
 305 310 315

<210> 4953

<211> 355

<212> DNA

<213> Homo sapiens

<400> 4953

gtgcacgcag gaaatggcgg gtgggaggca ggacaggaga gcccaggcct ggacaccact
 60
 gtcagcctgg ggatgcttgg cggtctctcc agtcctggga gcaggcatca cctggccgcg
 120
 ggtgccccct ggtggcagct tgaaggaagg acgggcagtg ggtcgcagcc agcggggacc
 180
 taccgccgaa aacgcacata aaagctggaa tcagcttggt acagctgcag gtccctctcg
 240
 tccgatttgg atagaccctc ttgggaccca ctgcaccagg gaaccccaaa tgcagctcag
 300
 cagcatggga ggagccctgt ctgctggggg tgtctgggat cgtcggagag aggct
 355

<210> 4954

<211> 114

<212> PRT

<213> Homo sapiens

<400> 4954

Met Ala Gly Gly Arg Gln Asp Arg Arg Ala Gln Ala Trp Thr Pro Leu
 1 5 10 15
 Ser Ala Trp Gly Cys Leu Ala Ala Ser Pro Val Leu Gly Ala Gly Ile
 20 25 30
 Thr Trp Pro Arg Val Pro Pro Gly Gly Ser Leu Lys Glu Gly Arg Ala
 35 40 45
 Val Gly Arg Ser Gln Arg Gly Pro Thr Pro Gln Asn Ala His Lys Ser

gaaaaccggg ttaatgatgc aatgaacatg ggccacactg ccaagcaggt aaagtccaca
 1080
 ggagaggcac tgggtgcaagg actcatgggt gcagcagtga cgctcaagaa cttgacaggt
 1140
 ctaaaccagc gtcggtgaga ggaaggggta taagctacaa tgcctagaag agaattgagcg
 1200
 gacagattga aagagctttg aaaagtataa ggtgccatcc acataacctg gtgttcacga
 1260
 gaacacacta aaggactcct gagtcactac cacagccacc tggaaaccac aaggcatttg
 1320
 atgctaccgt tctggtcagg gattgggctg cttcttcagt tcctaatacc agaccaagcc
 1380
 tcctgatgcc tttctgcact gcaactgtgt gattgaaaaa tgagatgttc atccaagcag
 1440
 tcaagccaca gaaaccagc atgtccctgt cacaatctca tgggcacctt gatcatgtct
 1500
 taaccttccc ttaaccttgg ggctcccaag ccagagtcaa ggtctgacgc cacctcaagg
 1560
 tgacagctca tctccagcac agcacaggcg tgtgcacaca gaggtgttcc ttgcagcccc
 1620
 ctccctctca ggtgtcctga gatgctgctc ctgggagccc cctcagaaaa ctgcctcacc
 1680
 tgagacaagt gcctgctgga cagaggtgtg attccaggcc tgggtgtcaca tgacaccagc
 1740
 atgcattgca ggattattag tgtattttga gtctgtaaaa ataataaata tgtttgaagt
 1800
 agttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 1835

<210> 4952

<211> 318

<212> PRT

<213> Homo sapiens

<400> 4952

Met Ala Ala Ala Val Ser Gly Ala Leu Gly Arg Ala Gly Trp Arg
 1 5 10 15
 Leu Leu Gln Leu Arg Cys Leu Pro Val Ala Arg Cys Arg Gln Ala Leu
 20 25 30
 Val Pro Arg Ala Phe His Ala Ser Ala Val Gly Leu Arg Ser Ser Asp
 35 40 45
 Glu Gln Lys Gln Gln Pro Pro Asn Ser Phe Ser Gln Gln His Ser Glu
 50 55 60
 Thr Gln Gly Ala Glu Lys Pro Asp Pro Glu Ser Ser His Ser Pro Pro
 65 70 75 80
 Arg Tyr Thr Asp Gln Gly Gly Glu Glu Glu Glu Asp Tyr Glu Ser Glu
 85 90 95
 Glu Gln Leu Gln His Arg Ile Leu Thr Ala Ala Leu Glu Phe Val Pro
 100 105 110
 Ala His Gly Trp Thr Ala Glu Ala Ile Ala Glu Gly Ala Gln Ser Leu
 115 120 125
 Gly Leu Ser Ser Ala Ala Ala Ser Met Phe Gly Arg Met Gly Ser Glu
 130 135 140
 Leu Ile Leu His Phe Val Thr Gln Cys Asn Thr Arg Leu Thr Arg Val

210	215	220
Ala Ala Gln Phe Cys Lys Asn Ala Asn Gly Ser Tyr Thr Cys Glu Glu		
225	230	235
Cys Asp Ser Ser Cys Val Gly Cys Thr Gly Glu Gly Pro Gly Asn Cys		240
	245	250
Lys Glu Cys Ile Ser Gly Tyr Ala Arg Glu His Gly Gln Cys Ala Asp		255
	260	265
Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys Asn Glu		270
	275	280
Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro Asp Gly		285
	290	295
Phe Glu Glu Xaa Gly Arg Cys Leu Cys Ala Ala Gly Arg Gly		300
305	310	315

<210> 4951

<211> 1835

<212> DNA

<213> Homo sapiens

<400> 4951

```

ngagctctgg cgctcagctg gccccacca ctctcacctg ccgcctgggc tcgctcccg
60
cttctctcca gccgtcgact ccacgcctcg cgcctctcgc gagaggagga ggctccacgg
120
agcgacgact tccgccctcc ttagggccgt ggtcccgtag ctaccggctg cgtcgccgtg
180
ggcgacgtgc ccgcttccaa aatggcgggc gcggcggtat ctggtgctgt tggccggggc
240
ggctggaggc tcctgcagct gcgatgcctg cccgtggccc gttgccgaca agccctggtg
300
ccgcgtgcct tccatgcttc agctgtgggg ctaaggtctt cagatgagca gaagcagcag
360
cctcccaact cattttctca gcagcattct gagaca'cagg gggcagaaaa acctgatcca
420
gagtcttctc attcaccccc caggtataca gaccagggcg gcgaggagga ggaggactat
480
gaaagtgagg agcagttgca gcaccgcac ctgacggcag cccttgagtt tgtgcccgcc
540
cacgggtgga cagcagaggc gattgcagaa ggagcccagt ctctgggtct ctccagtga
600
gcagccagca tgtttggaag gatgggcagt gagctaatac tgcattttgt gaccagtg
660
aataccggc tcacacgtgt gctagaagag gagcagaagc tggtagagtt gggccaggcg
720
gagaagagga agacagacca gttcctgagg gatgcagtgg aaaccagact gagaatgctg
780
atcccatata ttgagcactg gccccgggccc ctacgcatcc tcatgctccc tcacaacatc
840
ccgtccagcc tgagcctgct caccagcatg gtggatgaca tgtggcatta cgctggggac
900
cagtcactg attttaactg gtacaccgc cgagccatgc tggctgcat ctacaacaca
960
acagagctgg tgatgatgca ggactcctct ccagactttg aggacacttg gcgcttctg
1020

```

cctccctgca gcgctgcgca gttctgtaag aacgccaacg gctcctacac gtgcgaagag
 720
 tgtgactcca gctgtgtggg ctgcacaggg gaaggcccag gaaactgtaa agagtgtatc
 780
 tctggctacg cgaggagca cggacagtgt gcagatgtgg acgagtgtc actagcagaa
 840
 aaaacctgtg tgaggaaaaa cgaaaactgc tacaatactc caggagcta cgtctgtgtg
 900
 tgtcctgacg gcttcgaaga anacgaaga tgctgtgtg ccgccggcag aggctgaagc
 960
 cacagaagga gaaagcccga cacagctgcc ctcccgcgaa gacctgtaat gtgccggact
 1020
 taccctttaa attattcaga aggatgtccc gtggaaaatg tggccctgag gatgccgtct
 1080
 cctgcagtgg acagcggcgg ggagaggctg cctgctctct aacggttgat tctcatttgt
 1140
 cccttaaaca gctgcatttc ttggtgttgc ttaaacagac ttgtatatatt tgatacagtt
 1200
 ctttgaata aaattgacca ttgtaggtaa tcaggaggaa aaaaaaaaaa aaaaaaaaaa
 1259

<210> 4950

<211> 318

<212> PRT

<213> Homo sapiens

<400> 4950

Xaa	Pro	Ala	Cys	Pro	Pro	Gly	Tyr	Leu	Thr	Ala	Pro	Cys	His	Arg	Cys	1	5	10	15
Arg	Gly	Leu	Val	Asp	Lys	Phe	Asn	Gln	Gly	Met	Val	Asp	Thr	Ala	Lys	20	25	30	
Lys	Asn	Phe	Gly	Gly	Gly	Asn	Thr	Ala	Trp	Glu	Glu	Lys	Thr	Leu	Ser	35	40	45	
Lys	Tyr	Glu	Ser	Ser	Glu	Ile	Arg	Leu	Leu	Glu	Ile	Leu	Glu	Gly	Leu	50	55	60	
Cys	Glu	Ser	Ser	Asp	Phe	Glu	Cys	Asn	Gln	Met	Leu	Glu	Ala	Gln	Glu	65	70	75	80
Glu	His	Leu	Glu	Ala	Trp	Trp	Leu	Gln	Leu	Lys	Ser	Glu	Tyr	Pro	Asp	85	90	95	
Leu	Phe	Glu	Trp	Phe	Cys	Val	Lys	Thr	Leu	Lys	Val	Cys	Cys	Ser	Pro	100	105	110	
Gly	Thr	Tyr	Gly	Pro	Asp	Cys	Leu	Ala	Cys	Gln	Gly	Gly	Ser	Gln	Arg	115	120	125	
Pro	Cys	Ser	Gly	Asn	Gly	His	Cys	Ser	Gly	Asp	Gly	Ser	Arg	Gln	Gly	130	135	140	
Asp	Gly	Ser	Cys	Arg	Cys	His	Met	Gly	Tyr	Gln	Gly	Pro	Leu	Cys	Thr	145	150	155	160
Asp	Cys	Met	Asp	Gly	Tyr	Phe	Ser	Ser	Leu	Arg	Asn	Glu	Thr	His	Ser	165	170	175	
Ile	Cys	Thr	Ala	Cys	Asp	Glu	Ser	Cys	Lys	Thr	Cys	Ser	Gly	Leu	Thr	180	185	190	
Asn	Arg	Asp	Cys	Gly	Glu	Cys	Glu	Val	Gly	Trp	Val	Leu	Asp	Glu	Gly	195	200	205	
Ala	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Ala	Glu	Pro	Pro	Pro	Cys	Ser				

aaaaaaaaaa aaaaaaaaaa
2060

<210> 4948

<211> 127

<212> PRT

<213> Homo sapiens

<400> 4948

Ala Glu Leu Thr Pro Leu Pro Phe Ser Leu Gln Ala Leu Ser Ile Leu
1 5 10 15
Met Leu Pro His Asn Ile Pro Ser Ser Leu Ser Leu Leu Thr Ser Met
20 25 30
Val Asp Asp Met Trp His Tyr Ala Gly Asp Gln Ser Thr Asp Phe Asn
35 40 45
Trp Tyr Thr Arg Arg Ala Met Leu Ala Ala Ile Tyr Asn Thr Thr Glu
50 55 60
Leu Val Met Met Gln Asp Ser Ser Pro Asp Phe Glu Asp Thr Trp Arg
65 70 75 80
Phe Leu Glu Asn Arg Val Asn Asp Ala Met Asn Met Gly His Thr Ala
85 90 95
Lys Gln Val Lys Ser Thr Gly Glu Ala Leu Val Gln Gly Leu Met Gly
100 105 110
Ala Ala Val Thr Leu Lys Asn Leu Thr Xaa Leu Asn Gln Arg Arg
115 120 125

<210> 4949

<211> 1259

<212> DNA

<213> Homo sapiens

<400> 4949

nngccggcct gtccccagg ctacttgacg gcgcctgcc accggtgccg ggggctggtg
60
gacaagttaa accaggggat ggtggacacc gcaaagaaga actttggcgg cggaacacg
120
gcttgggagg aaaagacgct gtccaagtac gagtccagcg agattcgctt gctggagatc
180
ctggaggggc tgtgagagag cagcgacttc gaatgcaatc agatgctaga ggagcaggag
240
gagcacctgg aggctggtg gctgcagctg aagagcgaat atcctgactt attcgagtgg
300
ttttgtgtga agacactgaa agtgtgtgtc tctccaggaa cctacgggtc cgactgtctc
360
gcatgccagg gcggatccca gaggcctgc agcgggaatg gccactgcag cggagatggg
420
agcagacagg gcgacgggtc ctgccggtgc cacatggggt accagggccc gctgtgcact
480
gactgcatgg acggctactt cagctcgctc cggaacgaga cccacagcat ctgcacagcc
540
tgtgacgagt cctgcaagac gtgctcgggc ctgaccaaca gagactgcgg cgagtgtgaa
600
gtgggctggg tgctggacga gggcgctgt gtggatgtgg acgagtgtgc ggccgagccg
660

gtggtgccta accccaggcc gagtgtgact cattccacct tgcagttaaa gcagtggaag
480
tgcacgtatg aggccctcaa ctgccttctt gattcagcat agtgttttct tctgggctgc
540
ttactaaga gaaaacctta cagccaatcc aggacctctc tgatcacctc cccagtggat
600
gtagcattgg taaagtggaa ggaccttggt ctgtttgtca gtaggagctg atgtgtgtga
660
acggactcct atctctgctt ctccctttgt gtgacagact ggggtatctt tgcccatcct
720
tgcttagacc agtctagacc ctctggccct ctgcattccc agttccaaat gctagggatg
780
gagaatgtgc ttgggcttgc ataagacggg gctatgcccc tggctctcct cagctgtagt
840
cagcattgct agctgcccac aactcacgcc agtgggtgaa gatgctggtc tcagagaacc
900
agagcttggc agggccctc atacacctct tggagaggta gatgctggtc aactatgcac
960
cattacctgt gagcagagct tactcctctg ccattctctc tccaggccct cagcatcctc
1020
atgctccctc acaacatccc gtccagcctg agcctgctca ccagcatggg ggatgacatg
1080
tggcattacg ctggggacca gtccactgat tttaactggg acaccgccc agccatgctg
1140
gctgccatct acaacacaac agagctgggt atgatgcagg actcctctcc agactttgag
1200
gacacttggc gcttcttga aaaccgggtt aatgatgcaa tgaacatggg ccacactgcc
1260
aagcaggtaa agtccacagg agaggcactg gtgcaaggac tcatgggtgc agcagtgcg
1320
ctcaagaact tgacangtct aaaccagcgt cgggtgagagg aaggggtata agctacaatg
1380
cctagaagag aatgagcggg cagattgaaa gagctttgaa aagtataagg tgccatccac
1440
ataacctggg gttcacgaga acacactaaa ggactcctga gtcactacca cagccacctg
1500
gaaaccacaa ggcatttgat gctaccgttc tggtcaggga ttgggctgct tcttcagttc
1560
ctaataccag accaagcctc ctgatgcctt tctgactgc aactgtgtga ttgaaaaatg
1620
agatgttcat ccaagcagtc aagccacaga aaccagcat gtccctgtca caatctcatg
1680
ggcaccttga tcatgtctta accttccctt aaccttgggg ctccaagcc agagtcaagg
1740
tctgacgcca cctcaagggt acagctcatc tccagcacag cacaggcgtg tgcacacaga
1800
gggtgttctt gcagccctc cctctcagg tgtcctgaga tgetgctcct gggagccccc
1860
tcagaaaact gcctcacctg agacaagtgc ctgctggaca gaggtgtgat tccaggcctg
1920
gtgtcacatg acaccagcat gcattgcagg attattagtg tattttgagt ctgtaaaaat
1980
aataaatatg ttgaagtag ttaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2040

<210> 4946

<211> 197

<212> PRT

<213> Homo sapiens

<400> 4946

```

Thr Ser Asn Asn Ala Pro Pro Leu Asn Leu Glu Asp Lys Leu Gln Arg
 1          5          10          15
Gly Leu Lys Gly Lys Gln Glu Phe Trp Gln Gln Cys Val Ser Phe Ile
      20          25          30
Pro Pro Gly Gln Glu Tyr Arg Met Tyr Asn Thr Tyr Asp Val His Phe
      35          40          45
Tyr Ala Ser Phe Ala Leu Ile Met Leu Trp Pro Lys Leu Glu Leu Ser
 50          55          60
Leu Gln Tyr Asp Met Ala Leu Ala Thr Leu Arg Glu Asp Leu Thr Arg
65          70          75          80
Arg Arg Tyr Leu Met Ser Gly Val Met Ala Pro Val Lys Arg Arg Asn
      85          90          95
Val Ile Pro His Asp Ile Gly Asp Pro Asp Asp Glu Pro Trp Leu Arg
      100          105          110
Val Asn Ala Tyr Leu Ile His Asp Thr Ala Asp Trp Lys Asp Leu Asn
      115          120          125
Leu Lys Phe Val Leu Gln Val Tyr Arg Asp Tyr Tyr Leu Thr Gly Asp
      130          135          140
Gln Asn Phe Leu Lys Asp Met Trp Pro Val Cys Leu Val Arg Asp Ala
145          150          155          160
His Ala Val Ala Ser Val Pro Gly Val Trp Leu Val Ser Gly Lys Ser
      165          170          175
Leu Ala Gly Cys Cys Leu Ser Ser Val Pro Arg Ser Ser Thr Ser Trp
      180          185          190
Ser Leu Ser Arg Leu
      195

```

<210> 4947

<211> 2060

<212> DNA

<213> Homo sapiens

<400> 4947

```

nagtactgga tcccatcctg ggtgggggtc tcctagtggc ctgagtgtgc caccaggtct
60
gcagggagga ggaatccatg caggagggtta gaagagtcag aagattttat tggctgtctt
120
cacttgaata acagccctgt ggcatttttag atctcgagca ctgggatttg tcaattgtca
180
atgtgatgct tggggactgg catattcggt gcaagggggt ttttcacctt ttctgaagct
240
tcctttttcc tctgttttaa agcatatcac agtatgggccc attctctgag tgaagaaagt
300
acagagtga agtacacccg aagtgaagg gactcagaca tcttgtgtcc tttgctcagc
360
tggaagacta ctaagcacgt agtttcagtc attcagttga tagacatttg aacacttatg
420

```

cttgagctca gcctacagta tgacatggct ctggccactc tcagggagga cctgacacgg
240
cgacggtacc tgatgagtgg ggtgatggca cctgtgaaaa ggaggaacgt catcccccat
300
gatattgggg acccagatga tgaaccatgg ctccgcgtca atgcatattt aatccatgat
360
actgctgatt ggaaggacct gaacctgaag tttgtgctgc aggtttatcg ggactattac
420
ctcacgggtg atcaaaactt cctgaaggac atgtggcctg tgtgtctagt aagggatgca
480
catgcagtgg ccagtgtgcc aggggtatgg ttggtgtctg ggaagagcct agctggttgt
540
tgcttttctt cggtacctag gtcttcaaca tcttgggtccc tctctaggct gtgatggaat
600
ctgaaatgaa gtttgacaag gaccatgatg gactcattga aaatggaggc tatgcagacc
660
agacctatga tggatgggtg accacaggcc ccagggttagc gggtaggggt ttccaggagg
720
cctgaggtga gaaactgggc aacaagggat tgtagggtc aagaaagaat gactcattgt
780
ctattacacg gcatgggagc agctggagct gccagtctga ccccaaac catgtcctg
840
atcagtgtctt actgtggagg gctgtggctg gcagctgtgg ctgtgatggc ccagatggct
900
gctctgtgtg gggcacagga catccaggat aagttttctt ctatcctcag ccggggccaa
960
gaagcctatg agagactgct gtggaatggt gagttcgggg agcctaagta gtcttaaggc
1020
agctgagagg acaccaggag ccttattttt ctcttctcag actccaggcc gctattacaa
1080
ctatgacagc agctctcggc ctcatgtctg tagtgttatg tctgaccagt gtgctggaca
1140
gtggttcctg aaggcctgtg gcctaggaga aggagacact gaggtgtttc ctaccaaca
1200
tgtgtccgt gctctccaaa ctatctttga gctgaacgtc caggcctttg caggaggggc
1260
catgggggct gtgaatggga tgcagcccca tgggtgtcct gataaatcca gtgtgcagtc
1320
tgatgaagtc tgggtgggtg tgggtctacg gctggcagct accatgatcc aagaggtaat
1380
gcactccttt tcccatctct ccaccatctg tatcctggcc cagaaaactt cctcaaccac
1440
caaatttctt caaggcataa cccaatgcca tcttgtcctg ctataaagcc tcccattttt
1500
ccctgggatg cattccagct cctgccttca ggcttctgtc tgtgggtcat agttatctcc
1560
tccacttgct gggagctcct tgaaggcaaa gactotactg cctccatcta tccagtggaa
1620
gtggctcttc agagggtgcc aagtttagtat gtatgactgt catctctccc aacagggcct
1680
gacttgggag ggcttccaga cagctgaagg ctgctaccgt accgtgtggg agcgctggg
1740
tctggccttc cagaccccag aggcatactg ccagcagcga gtgttccgcg cg
1792

tcctcccttt cagaatatgc cttccgcatg tctcgtctca gtgcccggct atttggtgaa
 480
 gtcaccaggc ctactaattc caagtctatg aaagtgggta aactgttttag tgaactgccc
 540
 ttggccaaga agaaggagac ttatgattgg tatccaaatc accacactta cgctgaactc
 600
 atgcagacgc tccgatttct tggactctac agagatgagc atcaggattt tatggatgag
 660
 caaaaacgac taaagaagct tcgtggaaag gagaaaccaa agaaaggaga agggaaaaga
 720
 gcagcaaaaa ggaaatagtg ttggtccttc aagagggaga ctttcttctc cagtggcgga
 780
 gagaagaaag tgcatttatt gtctttccac atattggagg aatgtcatct tcctaaatga
 840
 agttttattg gaggaacaca gtcattctct tggtgaaatc taatccggtt acattgtggc
 900
 tggtttcttg aacacattct aactgtgcaa aattatcttg gccttggccg tgtaatgtga
 960
 ggtttacctg attctctaata gaaataaata cctaagttat aaaaaaaaaa aaaaaaaaaa
 1020

<210> 4944

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4944

Met	Ser	Ser	Leu	Ser	Glu	Tyr	Ala	Phe	Arg	Met	Ser	Arg	Leu	Ser	Ala
1				5					10					15	
Arg	Leu	Phe	Gly	Glu	Val	Thr	Arg	Pro	Thr	Asn	Ser	Lys	Ser	Met	Lys
			20					25					30		
Val	Val	Lys	Leu	Phe	Ser	Glu	Leu	Pro	Leu	Ala	Lys	Lys	Lys	Glu	Thr
		35					40					45			
Tyr	Asp	Trp	Tyr	Pro	Asn	His	His	Thr	Tyr	Ala	Glu	Leu	Met	Gln	Thr
		50				55					60				
Leu	Arg	Phe	Leu	Gly	Leu	Tyr	Arg	Asp	Glu	His	Gln	Asp	Phe	Met	Asp
65					70				75					80	
Glu	Gln	Lys	Arg	Leu	Lys	Lys	Leu	Arg	Gly	Lys	Glu	Lys	Pro	Lys	Lys
			85					90						95	
Gly	Glu	Gly	Lys	Arg	Ala	Ala	Lys	Arg	Lys						
			100					105							

<210> 4945

<211> 1792

<212> DNA

<213> Homo sapiens

<400> 4945

actagtaaca atgccccacc tctaaatcta gaggacaagc tacagagggg tttgaagggg
 60
 aagcaggaat tctggcaaca gtgtgtctca ttcattcttc caggccagga gtaccgcatg
 120
 tacaacacat atgatgtcca cttttatgct tcctttgccc tcatcatgct ctggcccaaa
 180

```

      210              215              220
Ser Ala Val Tyr Val Glu Met Leu Gln Ile Leu Leu Pro His Phe Ser
225              230              235              240
Asp Ala Arg Glu Val Val Arg Ser Ser Cys Ile Asn Leu Tyr Gly Lys
      245              250              255
Val Val Gln Lys Leu Arg Ala Pro Arg Thr Gln Ala Met Glu Glu Gln
      260              265              270
Leu Val Ser Thr Leu Val Pro Leu Leu Leu Thr Met Gln Glu Gly Asn
      275              280              285
Ser Lys Val Ser Gln Lys Cys Val Lys Thr Leu Leu Arg Cys Ser Tyr
      290              295              300
Phe Met Ala Trp Glu Leu Pro Lys Arg Ala Tyr Ser Arg Lys Pro Trp
305              310              315              320
Asp Asn Gln Gln Gln Thr Val Ala Lys Ile Cys Lys Cys Leu Val Asn
      325              330              335
Thr His Arg Asp Ser Ala Phe Ile Phe Leu Ser Gln Ser Leu Glu Tyr
      340              345              350
Ala Lys Asn Ser Arg Ala Ser Leu Arg Lys Cys Ser Val Met Phe Ile
      355              360              365
Gly Ser Leu Val Pro Cys Met Glu Ser Ile Met Thr Glu Asp Arg Leu
      370              375              380
Asn Glu Val Lys Ala Ala Leu Asp Asn Leu Arg His Asp Pro Glu Ala
385              390              395              400
Ser Val Cys Ile Tyr Ala Ala Gln Val Gln Asp His Ile Leu Ala Ser
      405              410              415
Cys Trp Gln Asn Ser Trp Leu Pro His Gly Asn Ser Trp Val Cys Tyr
      420              425              430
Ser Ala Thr Thr His Arg Trp Ser Pro Ser Cys Glu Asn Leu Pro Thr
      435              440              445
Ser His Gln Arg Arg Ser Trp Ile Met Gln Ala Leu Gly Ser Trp Lys
      450              455              460
Met Ser Leu Lys Lys
465

```

<210> 4943

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 4943

```

nnacgcgtgg gtaggaagg gcaggtctag gtaaggctgt cggtgacttt gggggtctgc
60
agcaaggggc gatggctgcg aagtctacgg ggggtctcaa cctttagtag tcgccaggaa
120
tagggcgaat ccacttcatt agtgaccagc tcgggcgggt cactgcatc acacaaataa
180
cttggccttt ttctgcctca gttgggggat ttcttaaacy tagaatcccc gcgtttccgc
240
tgccgtaatt tcctctcagg cgcaattact ctctccata ttgggtaaca gtagaaggct
300
cagttttctt gctcatcaca cggccttcgg cactgtagct ttgggtgggt ggctgcagat
360
taattttgta accaccttaa gaaaaatag gaactctaac tccttgccac tcaagaaatg
420

```

tcttacttca tggcttggga gttgccaaaa agagcttata gccggaagcc ctgggacaac
 1200
 caacagcaga cagtggccaa aatttgcaag tgccttgtga acaccaccg agacagcgcc
 1260
 ttcatattcc tcagccagag cctggagtat gccaagaact cacgggcctc cctccggaag
 1320
 tgctcagtca tgttcatagg gtccctggtc ccttgcattg agagcataat gacagaagat
 1380
 cgtctgaatg aagtgaagc tgctctggat aacttgagac atgaccaga agcatcagtg
 1440
 tgcattctacg cagcccaggt ccaggaccac atcctggcca gctgctggca gaactcctgg
 1500
 ctgccgcacg ggaactcatg ggtgtgttac tcagccacca cccaccgctg gagccccagc
 1560
 tgtgagaacc tgcccacttc ccaccagcgg cgctcctgga tcatgcaggc actgggctcc
 1620
 tggaagatgt ccttgaagaa gtgacgtccc tgagcccaa accctctca ggggtggtga
 1680
 gttccagcca tgctccctat aaatgtcatg tggcttaa
 1718

<210> 4942

<211> 469

<212> PRT

<213> Homo sapiens

<400> 4942

Met Gly Arg Val Arg Arg Ile Tyr Pro Gln Leu Leu Leu Ala Leu Leu
 1 5 10 15
 Ile Gln Val His Tyr His Ile Gly Leu Asn Leu Pro Gly Cys Val Ala
 20 25 30
 Pro Pro Lys Asp Thr Lys Lys Gly Ala Gln Pro Ser Pro Phe Val Pro
 35 40 45
 Val Arg Trp Val Val Lys Val Val Lys Thr Leu Leu Leu Arg Met Gly
 50 55 60
 Cys Ser Tyr Glu Thr Thr Phe Leu Glu Asp Gln Gly Gly Trp Glu Leu
 65 70 75 80
 Met Glu Gln Val Glu Ser His His Arg Gly Val Ala Leu Leu Ala Arg
 85 90 95
 Ala Met Val Gln Tyr Ser Cys Gln Glu Leu Cys Arg Ile Leu Tyr Leu
 100 105 110
 Leu Ile Pro Leu Leu Glu Arg Gly Asp Glu Lys His Arg Ile Thr Ala
 115 120 125
 Thr Ala Phe Phe Val Glu Leu Leu Gln Met Glu Gln Val Arg Arg Ile
 130 135 140
 Pro Glu Glu Tyr Ser Leu Gly Arg Met Ala Glu Gly Leu Ser His His
 145 150 155 160
 Asp Pro Ile Met Lys Val Leu Ser Ile Arg Gly Leu Val Ile Leu Ala
 165 170 175
 Arg Arg Ser Glu Lys Thr Ala Lys Val Lys Ala Leu Leu Pro Ser Met
 180 185 190
 Val Lys Gly Leu Lys Asn Met Asp Gly Met Leu Val Val Glu Ala Val
 195 200 205
 His Asn Leu Lys Ala Val Phe Lys Gly Arg Asp Gln Lys Leu Met Asp

	85		90		95										
Ser	Lys	Ala	Ser	Pro	Ala	Pro	Ala	Ala	Leu	Met	Cys	Gly	Thr	Thr	Ser
		100				105						110			
Pro	Pro	Ile	Pro	Ala	Ala	Thr	Glu	Pro	Val	Cys	Ala	Ser	Ser	Arg	
		115				120						125			
Ser	Gly	Arg	Pro	Thr	Ala	Thr	Ala	Cys	Ser	Leu	Gln	Pro	Leu	Leu	Asp
		130				135						140			
Val	Leu	Ser	Ala	Ser	Ala	Ser	Ser	Ser	Ser	Val	Ser	Leu	Ala		
145				150						155					

<210> 4941

<211> 1718

<212> DNA

<213> Homo sapiens

<400> 4941

```

ntcatgaccg aggttgtggt ggcctgctc atgtgcccc tccactgaa cagcaatgga
60
gcagagatgt ggaggcagct gatactgtgt aagcccagct gtgatgtccg agacctcctg
120
gatctgctcc tgggcagcct gaaggagaag cccgtcacca aggagggccg ggcttccatc
180
gtgccccctgg cggcagccag cggcctgtgc gagctcctgt cgtcaacag ctgcatgggc
240
cgtgtgaggc gcatctaccc tcagctgctc ctggccctgc tcattcaggt ccattaccac
300
atcggcctca acctgcctgg ctgctgtggt cctcccaagg acaccaagaa ggggtgcacg
360
ccctctccct tcgtacctgt gcgctgggtg gtgaaagtgg tgaaccctt gctactgagg
420
atgggctgct cttatgagac cacgtttctg gaggaccagg gtggctggga gctcatggag
480
caggtggaga gccaccaccg cggagtggcc ttgctggcaa gggccatggt gcagtactcc
540
tgccaggagc tgtgccgcat cctctacctg ctcatccgc tcctggagcg aggcgacgag
600
aagcacagga tcacggccac cgccttcttc gtggagctcc tccagatgga gcaggtgcgc
660
cggatccccg aggaatactc tctggggcgg atggcagaag gctgagcca ccacgacccc
720
atcatgaagg tgctgtccat tcgaggcctg gtcactctgg cccgcaggtc tgagaagacc
780
gccaaggtga aggcctcct gccttccatg gtgaagggcc tgaagaacat ggatgggatg
840
ctggtggtgg aagcgttcca caacctcaag gctgtcttca aggggcggga ccagaagctg
900
atggacagtg cggctctatg ggagatgctg cagatcctgc tgccgcactt cagcgacgca
960
cgagaggtcg tgcgctctc ctgcatcaac ctgtatggga aggtggtcca gaagcttcgg
1020
gcaccacgca ctcaggccat ggaggagcag ctggtcagca ccttggtgcc cctactgctg
1080
accatgcagg agggcaactc caagtaagc cagaagtgtg tgaagacct gttacgctgt
1140

```

85 90 95
 Trp Ala Leu Tyr Lys Gln Arg Glu Ala Pro Glu Leu Val
 100 105

<210> 4939
 <211> 730
 <212> DNA
 <213> Homo sapiens

<400> 4939
 nnacgcgtcc acttttctag aagcccccca gcctccacca tggctcccat cccctctgcc
 60
 ctcgctgtct gggagcccg cggatccagc ccacagctgt cctctgcgcc tgcagattcc
 120
 tcggcctcta cccgccctcc ccaaggtcct cctccctgg actcaaaagc ctctacttgg
 180
 ctgcctctgc cagtcacctc ttctctgtct gagccctcca gaccaaattc ttgccacct
 240
 gcatgctctc ctgctgtctc ctcttcttt tctttcgagt cccagccttg cccaagcgcc
 300
 ccttccaaag cttcaccagc gccagcagcg ctgatgtgtg ggaccacatc acccccata
 360
 atcccagcag ccacagagcc agtctgtgca tcctcacggt ccgggaggcc cacagccacc
 420
 gcttgagcc tccagcctct tctggatgtt ctgtcagcct ccgcctctc atctcagtt
 480
 tctctggcat aggcctctcc cagtgcggg caaggccctg cgtctgcccc tgtgcttccg
 540
 tccagctcct gggttctctga gacagatgcc tctccctcct cagttccaca tcccgcgtcc
 600
 tgggttgta gccctcccc gcctgcctct gggacttctg atagttcaga ctctcggtct
 660
 ccttcagcct cagccgccag ggctggcct ccgcagctct cctcctctc ccgctgctcg
 720
 ccacggccg
 730

<210> 4940
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 4940
 Ser Arg Ser Pro Pro Ala Ser Thr Met Ala Pro Ile Pro Ser Ala Leu
 1 5 10 15
 Ala Val Trp Glu Pro Ala Gly Ser Ser Pro Gln Leu Ser Ser Ala Pro
 20 25 30
 Ala Asp Ser Ser Ala Ser Thr Arg Pro Pro Gln Gly Pro Pro Ser Leu
 35 40 45
 Asp Ser Lys Ala Ser Thr Trp Leu Pro Leu Pro Val Thr Ser Ser Ser
 50 55 60
 Ala Glu Pro Ser Arg Pro Asn Ser Cys Pro Pro Ala Cys Ser Pro Ala
 65 70 75 80
 Ala Ala Ser Ser Phe Ser Phe Glu Ser Gln Pro Cys Pro Ser Ala Pro

<400> 4938																
Met	Lys	Arg	Gly	Val	Pro	His	Ser	Leu	Gly	Pro	Gly	Thr	Lys	Leu	Ser	
1				5					10					15		
Ser	Val	Val	Leu	Ile	Cys	Arg	Ala	Ser	Ala	Leu	Ser	Arg	Tyr	Leu	Val	
			20					25					30			
Val	Ala	Glu	Pro	Trp	Pro	Thr	Arg	Ser	Gln	Gly	Gly	Arg	Gln	Pro	Gly	
		35					40					45				
Cys	Thr	Leu	Thr	Leu	Gly	Val	Cys	Ala	Asp	Gly	Arg	Trp	Glu	Glu	Thr	
	50					55					60					
Asp	Gln	Gln	Glu	Val	Phe	Ser	Ser	Gly	Val	Ala	Ser	Pro	Thr	Leu	Asn	
65					70					75					80	
Leu	Arg	Ala	Ser	Ser	Ser	Pro	Ala	Lys	Ala	Arg	Ala	Leu	Ser	Arg	Pro	

ccatgaattg tcatttatag tccaattttt tatcttaatc ataaaatggt taggaatcta
 1500
 tgaaatttaa ctttaggaac aaaacgttta gcagggttga ttgatattat ttttacattg
 1560
 ttctggcaat ccacagaaag agaagagcct taatttttaa aaccattttt agtcatttta
 1620
 tgacaattaa agttgtttta taaacatctt ttttcaaaga aaaaaaaa
 1668

<210> 4936

<211> 337

<212> PRT

<213> Homo sapiens

<400> 4936

Gly	Lys	Phe	Leu	Ala	Cys	Val	Ser	Gln	Asp	Gly	Phe	Leu	Arg	Val	Phe
1				5					10					15	
Asn	Phe	Asp	Ser	Val	Glu	Leu	His	Gly	Thr	Met	Lys	Ser	Tyr	Phe	Gly
			20					25					30		
Gly	Leu	Leu	Cys	Val	Cys	Trp	Ser	Pro	Asp	Gly	Lys	Tyr	Ile	Val	Thr
	35					40						45			
Gly	Gly	Glu	Asp	Asp	Leu	Val	Thr	Val	Trp	Ser	Phe	Val	Asp	Cys	Arg
	50				55						60				
Val	Ile	Ala	Arg	Gly	His	Gly	His	Lys	Ser	Trp	Val	Ser	Val	Val	Ala
65					70					75					80
Phe	Asp	Pro	Tyr	Thr	Thr	Ser	Val	Glu	Glu	Gly	Asp	Pro	Met	Glu	Phe
				85					90					95	
Ser	Gly	Ser	Asp	Glu	Asp	Phe	Gln	Asp	Leu	Leu	His	Phe	Gly	Glu	Ile
			100					105					110		
Glu	Gln	Ile	Val	His	Ser	Pro	Gly	Ser	Pro	Asn	Gly	Thr	Leu	Gln	Thr
	115					120						125			
Ala	Ala	Pro	Ser	Val	Thr	Tyr	Arg	Phe	Gly	Ser	Val	Gly	Gln	Asp	Thr
	130					135					140				
Gln	Leu	Cys	Leu	Trp	Asp	Leu	Thr	Glu	Asp	Ile	Leu	Phe	Pro	His	Gln
145					150					155					160
Pro	Leu	Ser	Arg	Ala	Arg	Thr	His	Thr	Asn	Val	Met	Asn	Ala	Thr	Ser
				165					170					175	
Pro	Pro	Ala	Gly	Ser	Asn	Gly	Asn	Ser	Val	Thr	Thr	Pro	Gly	Asn	Ser
			180				185						190		
Val	Pro	Pro	Pro	Leu	Pro	Arg	Ser	Asn	Ser	Leu	Pro	His	Ser	Ala	Val
	195					200						205			
Ser	Asn	Ala	Gly	Ser	Lys	Ser	Ser	Val	Met	Asp	Gly	Ala	Ile	Ala	Ser
	210					215					220				
Gly	Val	Ser	Lys	Phe	Ala	Thr	Leu	Ser	Leu	His	Asp	Arg	Lys	Glu	Arg
225					230					235					240
His	His	Glu	Lys	Asp	His	Lys	Arg	Asn	His	Ser	Met	Gly	His	Ile	Ser
				245					250					255	
Ser	Lys	Ser	Ser	Asp	Lys	Leu	Asn	Leu	Val	Thr	Lys	Thr	Lys	Thr	Asp
			260					265					270		
Pro	Ala	Lys	Thr	Leu	Gly	Thr	Pro	Leu	Cys	Pro	Arg	Met	Glu	Asp	Val
	275						280					285			
Pro	Leu	Glu	Pro	Leu	Ile	Cys	Lys	Lys	Ile	Ala	His	Glu	Arg	Leu	
	290				295					300					
Thr	Val	Leu	Ile	Phe	Leu	Glu	Asp	Cys	Ile	Val	Thr	Ala	Cys	Gln	Glu

<210> 4935

<211> 1668

<212> DNA

<213> Homo sapiens

<400> 4935

ggcaagttct tagcgtgctg gagccaggac gggtttctgc ggggtgtcaa ctttgactca
60
gtggagctgc acggtacgat gaaaagctac tttgggggct tgctgtgtgt gtgctggagc
120
ccggatggca agtacatcgt gacaggtggg gaggacgact tggtgacagt ctggtccttt
180
gtagactgcc gagtaatagc cagaggccac gggcacaagt cctgggtcag tgttgtagcg
240
tttgaccctt ataccactag tgtagaagaa ggtgacccta tggagttag tggcagcgat
300
gaggacttcc aagaccttct tcattttggc gagatcgagc aaatagtaca cagtccaggc
360
tctccaaacg gaactctaca gacagccgcc ccgagtgtca cgtatcgggt tggttccgtg
420
ggccaggaca cacagctctg tttatgggac cttacagaag atatcctttt ccctcaccaa
480
cccctctcaa gagcaaggac acacacaaat gtcataaatg ccacgagtcc tctgctgga
540
agcaatggga acagtgttac aacacccggg aactctgtgc cgctcctct gccacggtcc
600
aacagccttc cacattcagc agtctcaaat gctggcagca aaagcagtgt catggacggg
660
gccattgctt ctgggggtcag caaatttgca acactttcac tacatgaccg gaaggagagg
720
caccacgaga aagatcacia gcgaaatcat agcatgggac acatttctag caagagcagt
780
gacaaactga atctagttac caaaaccaa acggaccctg ctaaaactct gggaaacgcc
840
ctgtgtcctc gaatggaaga tgttcccttg ttagagccgc tgatatgtaa aaagatagca
900
catgagagac tgactgtact aatatttctt gaagactgta tagtcactgc ttgtcaggag
960
ggatttattt gcacatgggg aaggcctggt aaagtggtaa gttttaatcc ttaatgctgc
1020
accagatcta gaacttgaat aggtagtgc ttttttcttt ttcgtgggag ggggtggggtg
1080
tacaatgaat gtgaatgaca cttcttattc ttaatgtaaa tctcaatgca tcagagccat
1140
aattttggat actgcatgcc atgtaattct gaatcatttg ataatttacc ttagagcatt
1200
taaaaaata taatcaaact aattgccagc caagtcagtc atcctcctgg gagtatatag
1260
agtcccaagg ttagcgtctc tgtattagac tatttcaatt ttaggaaaat catgaccatg
1320
tggggaaaca atgactttaa aatgctgaaa ttaaaattta tgctttaact ggaatatttt
1380
ttgcttaact actcaattag aatattgtac acctgatcaa tgtgtgttca gcacagatgg
1440

tggaagccgc ggcagacgta tgatgacatc gacgacgtgg tgatccccgc gcccatccag
 420
 caggtgggtga cgggccagtc gggcctcttc acgcagtaca atatccagaa gaaggccatg
 480
 acagtgggag agtaccgccg cctggccaac agcgagaagt actgtacccc gcggcaccag
 540
 gactttgacg accttgaacg caaatactgg aagaacctca cctttgtctc cccgatctac
 600
 ggggctgaca tcagcggctc tttgtatgat gacgtaagta tgaggctccg gggaagaaca
 660
 gggaccagct tcttgggtggg tgggtgggtggg agggccctga acgggactct gccttggcag
 720
 atgaagcttc caggcaggca aggttaaccc cctcgcccag gctctggatg cgggcctcgc
 780
 cctgtgggtga cgaaagagga agccaggctt tctctgattt ttgcagggcc cctcctgcct
 840
 caccctgcag cccccacct gagctcacc tggccccacc tctggcctca gcagccggcc
 900
 cacagcgtgt taaaaacag tgtactttcc cagtccctgc cgctcgtctt cctggcactg
 960
 tggagcctcg agtcc
 975

<210> 4934

<211> 181

<212> PRT

<213> Homo sapiens

<400> 4934

Met	Gly	Ser	Glu	Asp	His	Gly	Ala	Gln	Asn	Pro	Ser	Cys	Lys	Ile	Met
1				5					10					15	
Thr	Phe	Arg	Pro	Thr	Met	Glu	Glu	Phe	Lys	Asp	Phe	Asn	Lys	Tyr	Val
			20					25					30		
Ala	Tyr	Ile	Glu	Ser	Gln	Gly	Ala	His	Arg	Ala	Gly	Leu	Ala	Lys	Ile
		35					40					45			
Ile	Pro	Pro	Lys	Glu	Trp	Lys	Pro	Arg	Gln	Thr	Tyr	Asp	Asp	Ile	Asp
		50				55					60				
Asp	Val	Val	Ile	Pro	Ala	Pro	Ile	Gln	Gln	Val	Val	Thr	Gly	Gln	Ser
65					70					75				80	
Gly	Leu	Phe	Thr	Gln	Tyr	Asn	Ile	Gln	Lys	Lys	Ala	Met	Thr	Val	Gly
			85						90					95	
Glu	Tyr	Arg	Arg	Leu	Ala	Asn	Ser	Glu	Lys	Tyr	Cys	Thr	Pro	Arg	His
			100						105					110	
Gln	Asp	Phe	Asp	Asp	Leu	Glu	Arg	Lys	Tyr	Trp	Lys	Asn	Leu	Thr	Phe
			115						120				125		
Val	Ser	Pro	Ile	Tyr	Gly	Ala	Asp	Ile	Ser	Gly	Ser	Leu	Tyr	Asp	Asp
			130				135					140			
Val	Ser	Met	Arg	Leu	Arg	Gly	Arg	Thr	Gly	Thr	Ser	Phe	Leu	Val	Gly
145					150					155				160	
Gly	Gly	Gly	Arg	Ala	Leu	Asn	Gly	Thr	Leu	Pro	Trp	Gln	Met	Lys	Leu
			165						170					175	
Pro	Gly	Arg	Gln	Gly											
			180												

<210> 4931
 <211> 261
 <212> DNA
 <213> Homo sapiens

<400> 4931
 atcatcctgg gcttggcctt tggcnacctg gagagtaagt ccagcatcaa gcggtgctg
 60
 gccatcacca cagtgtgtc cccggcccta tccgtcacc aggggacccg gaagatcctg
 120
 taccgtatg cccatctctc agctgaggac tttaatatct atggccatgg gggccgccag
 180
 ttctggctgg tcagctcctg cttcttcttc ctgtcggag gagcttctac gtgtatggg
 240
 gcatcctggc accgtcaac n
 261

<210> 4932
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 4932
 Ile Ile Leu Gly Leu Ala Phe Gly Xaa Leu Glu Ser Lys Ser Ser Ile
 1 5 10 15
 Lys Arg Val Leu Ala Ile Thr Thr Val Leu Ser Pro Ala Leu Ser Val
 20 25 30
 Thr Gln Gly Thr Arg Lys Ile Leu Tyr Pro Tyr Ala His Leu Ser Ala
 35 40 45
 Glu Asp Phe Asn Ile Tyr Gly His Gly Gly Arg Gln Phe Trp Leu Val
 50 55 60
 Ser Ser Cys Phe Phe Phe Leu Leu Gly Gly Ala Ser Thr Cys Met Arg
 65 70 75 80
 Ala Ser Trp His Arg Ser Thr
 85

<210> 4933
 <211> 975
 <212> DNA
 <213> Homo sapiens

<400> 4933
 ntgacgaggc cgctcgtggt tttctcttct gccctcactc agccgcgagg gccagccgc
 60
 ctttgcctc ctggtggcca cggtattttt agcacgctcc gttctgaggg aggacgggct
 120
 ccaagggtg ggcattggcg caccgtggt tcacctctc tcgtcttctt ccacaggtgt
 180
 gcttcccgca cagtgcagc catggggtct gaggaccacg gcgcccagaa cccagctgt
 240
 aaaatcatga cgtttcgccc aaccatggaa gaatttaaag acttcaacaa atacgtggcc
 300
 tacatagagt cgcagggagc ccaccgggcg ggcctggcca agatcatccc cccgaaggag
 360

225 230 235 240
 Asn Thr Ser Ser Pro Ser Ser Glu Gly Ser Leu Ser Gln Arg Gln Arg
 245 250 255
 Ser Thr Ser Thr Pro Asn Val His Met Val Ser Thr Thr Leu Pro Val
 260 265 270
 Asp Ser Arg Met Ile Glu Asp Ala Ile Arg Ser His Ser Glu Ser Ala
 275 280 285
 Ser Pro Ser Ala Leu Ser Ser Ser Pro Asn Asn Leu Ser Pro Thr Gly
 290 295 300
 Trp Ser Gln Pro Lys Thr Pro Val Pro Ala Gln Arg Glu Arg Ala Pro
 305 310 315 320
 Val Ser Gly Thr Gln Glu Lys Asn Lys Ile Arg Pro Arg Gly Gln Arg
 325 330 335
 Asp Ser Ser Tyr Tyr Trp Glu Ile Glu Ala Ser Glu Val Met Leu Ser
 340 345 350
 Thr Arg Ile Gly Ser Gly Ser Phe Gly Thr Val Tyr Lys Gly Lys Trp
 355 360 365
 His Gly Asp Val Ala Val Lys Ile Leu Lys Val Val Asp Pro Thr Pro
 370 375 380
 Glu Gln Phe Gln Ala Phe Arg Asn Glu Val Ala Val Leu Arg Lys Thr
 385 390 395 400
 Arg His Val Asn Ile Leu Leu Phe Met Gly Tyr Met Thr Lys Asp Asn
 405 410 415
 Leu Ala Ile Val Thr Gln Trp Cys Glu Gly Ser Ser Leu Tyr Lys His
 420 425 430
 Leu His Val Gln Glu Thr Lys Phe Gln Met Phe Gln Leu Ile Asp Ile
 435 440 445
 Ala Arg Gln Thr Ala Gln Gly Met Asp Tyr Leu His Ala Lys Asn Ile
 450 455 460
 Ile His Arg Asp Met Lys Ser Asn Asn Ile Phe Leu His Glu Gly Leu
 465 470 475 480
 Thr Val Lys Ile Gly Asp Phe Gly Leu Ala Thr Val Lys Ser Arg Trp
 485 490 495
 Ser Gly Ser Gln Gln Val Glu Gln Pro Thr Gly Ser Val Leu Trp Met
 500 505 510
 Ala Pro Glu Val Ile Arg Met Gln Asp Asn Asn Pro Phe Ser Phe Gln
 515 520 525
 Ser Asp Val Tyr Ser Tyr Gly Ile Val Leu Tyr Glu Leu Met Thr Gly
 530 535 540
 Glu Leu Pro Tyr Ser His Ile Asn Asn Arg Asp Gln Ile Ile Phe Met
 545 550 555 560
 Val Gly Arg Gly Tyr Ala Ser Pro Asp Leu Ser Lys Leu Tyr Lys Asn
 565 570 575
 Cys Pro Lys Ala Met Lys Arg Leu Val Ala Asp Cys Val Lys Lys Val
 580 585 590
 Lys Glu Glu Arg Pro Leu Phe Pro Gln Ile Leu Ser Ser Ile Glu Leu
 595 600 605
 Leu Gln His Ser Leu Pro Lys Ile Asn Arg Ser Ala Ser Glu Pro Ser
 610 615 620
 Leu His Arg Ala Ala His Thr Glu Asp Ile Asn Ala Cys Thr Leu Thr
 625 630 635 640
 Thr Ser Pro Arg Leu Pro Val Phe
 645

gatggcatcc aggtaggaat gcggttcat ctcggggctg ggctgggggt cgctgcagct
 5460
 gcttgatta ctcaccatgc tcggctgggt cttcctttca gccatgccag agagatttcg
 5520
 gtctctaaga accaatgttc tcttttcacg ctttcgggt tcatgtgagt tagttttcac
 5580
 aatggatgca gtgacctcg aaggagggtg aggactgtgg aaagctgggg agggcacact
 5640
 gtgggccatg gtgcccacag cacctccagc tgcagcagag ggcctcgtgt ggtcatatct
 5700
 gcaccgagtt ccataggcac agtagccctt ctggtagtac ttgcagatgg tggacggttt
 5760
 gctgtttgcc aagtcagtgt agaataggca ctgacttcct tcccacaca caccatgcat
 5820
 aaaatacctg caagtatct gcttgggtgct catggtggct gggctgaggg accgtcgtcg
 5880
 tgccgccgcc tctgcagcc gctgccc
 5907

<210> 4930

<211> 648

<212> PRT

<213> Homo sapiens

<400> 4930

Met	Glu	His	Ile	Gln	Gly	Ala	Trp	Lys	Thr	Ile	Ser	Asn	Gly	Phe	Gly	1	5	10	15
Phe	Lys	Asp	Ala	Val	Phe	Asp	Gly	Ser	Ser	Cys	Ile	Ser	Pro	Thr	Ile	20	25	30	
Val	Gln	Gln	Phe	Gly	Tyr	Gln	Arg	Arg	Ala	Ser	Asp	Asp	Gly	Lys	Leu	35	40	45	
Thr	Asp	Pro	Ser	Lys	Thr	Ser	Asn	Thr	Ile	Arg	Val	Phe	Leu	Pro	Asn	50	55	60	
Lys	Gln	Arg	Thr	Val	Val	Asn	Val	Arg	Asn	Gly	Met	Ser	Leu	His	Asp	65	70	75	80
Cys	Leu	Met	Lys	Ala	Leu	Lys	Val	Arg	Gly	Leu	Gln	Pro	Glu	Cys	Cys	85	90	95	
Ala	Val	Phe	Arg	Leu	Leu	His	Glu	His	Lys	Gly	Lys	Lys	Ala	Arg	Leu	100	105	110	
Asp	Trp	Asn	Thr	Asp	Ala	Ala	Ser	Leu	Ile	Gly	Glu	Glu	Leu	Gln	Val	115	120	125	
Asp	Phe	Leu	Asp	His	Val	Pro	Leu	Thr	Thr	His	Asn	Phe	Ala	Arg	Lys	130	135	140	
Thr	Phe	Leu	Lys	Leu	Ala	Phe	Cys	Asp	Ile	Cys	Gln	Lys	Phe	Leu	Leu	145	150	155	160
Asn	Gly	Phe	Arg	Cys	Gln	Thr	Cys	Gly	Tyr	Lys	Phe	His	Glu	His	Cys	165	170	175	
Ser	Thr	Lys	Val	Pro	Thr	Met	Cys	Val	Asp	Trp	Ser	Asn	Ile	Arg	Gln	180	185	190	
Leu	Leu	Leu	Phe	Pro	Asn	Ser	Thr	Ile	Gly	Asp	Ser	Gly	Val	Pro	Ala	195	200	205	
Leu	Pro	Ser	Leu	Thr	Met	Arg	Arg	Met	Arg	Glu	Ser	Val	Ser	Arg	Met	210	215	220	
Pro	Val	Ser	Ser	Gln	His	Arg	Tyr	Ser	Thr	Pro	His	Ala	Phe	Thr	Phe				

ttgagttctc aatacaatta ccctgatggg caagaaccca caggtgagag cagaggcttg
3840
gttcccctag agggcccttg ctggaggccc caacaccaac cagacgacag gagggccaga
3900
ctgctaccca gtactgtacc tctgtctct tcaagagcct ccctaaggga gaagaagatc
3960
tatacttcca ctttgtttgc tgcacatgtg gcaacaagat tgctaccctg atttgggaca
4020
cttgagagaa cttgaaaaaa atgaccaccc ttaaagccct agaaaaaagt tgtatgtttg
4080
ttaaccagct aatctgcgct cacttggcat tgttgtttct tgaaagctct gtataaatca
4140
aaattttgac gacacactaa atacactaga gaaatacact atagaggaat ctttttatag
4200
ggctgaagac tcctttggta agaaaaatat gctgcattag gggcagctgc aagtttacta
4260
tttctgggga agaaaagatc aaagataaga gccaggtttg ttttttaaag caatcaatcc
4320
aaacagtttg ggtgtttgtt agttgttacc cctgaggggc ttgaggtgta actatatcag
4380
ctataaaaaat agcaattcca tacatttaat taggttactt tatatctttc actcttcccc
4440
atggctgtaa taatggagat tgaatgagac taaggctaag cccaactcca ctcaaatcca
4500
agtcacacgt caccttggct gcagtacagg gaagctccgc acaccctggc ttgggaaagt
4560
ttcggccgat ggagcccaag atgcagggca accatctact ctttaggggt ctgatgatcc
4620
cactccagaa aggtgcatga agaggtcccc gagctctgtc atgtcgacat cttcattgtt
4680
ggggacatgc cggctttctc ggttctcgat gaaatcccag agccgcactg aattaaagaa
4740
cctcacagtg ccttgagaac tgagctgttt ccgaggtttc tcaggctctg ctagccgccc
4800
atcggggtaa gcatggcgat aaagacattt gcttccaaat gggcagggtc ctttgccttg
4860
ctcaaagtat ttacaggctt ttttccccat ccctgtttg aaagcttcaa tcaactcggt
4920
ctttttattc tgatcttcca cccaatacac acttgggaatt acaaactctg atatcacacg
4980
gcattctgga caagacttaa tgattgggtt ttcaaactgt ttggcacacc gccactgccg
5040
gatgcaggac aaacagtacg tgtgattgca attggagaga atcccaaate tctctcaga
5100
agcagaggcc ttctccagga tcaattccat gcagatactg cacactttgt cctggcttgc
5160
ctggaaggca aaggcctttt ccatctcgtg ttcgaacgtc aacatgcaga tcttttcatg
5220
agccttctc tgctctgggt cgaatgggtg caagacttgc agcctacaga tttcacacac
5280
ctccccgtgc aggtagacac aggcaccccc aaaccggcac tccccagcag ctgcgtaggg
5340
gcacagctgc tgctcgttgc tgtaggagct gctggcctcc acgtcatcaa ggccactcct
5400

caacactctc taccgaagat caaccggagc gcttccgagc catccttgca tcgggcagcc
2220
cacactgagg atatcaatgc ttgcacgctg accacgtccc cgaggctgcc tgtcttctag
2280
ttgactttgc acctgtcttc aggctgccag gggaggagga gaagccagca ggcaaccactt
2340
ttctgctccc tttctocaga ggcagaacac atgttttcag agaagctgct gctaaggacc
2400
ttctagactg ctacacagggc cttaacttca tgttgcttc ttttctatcc ctttggggcc
2460
ctgggagaag gaagccattt gcagtgtggt tgtgtcctgc tccctcccca cattcccat
2520
gctcaaggcc cagccttctg tagatgcgca agtggatgtt gatggtagta caaaaagcag
2580
gggcccagcc ccagctgttg gctacatgag tatttagagg aagtaaggta gcaggcagtc
2640
cagccctgat gtggagacac atgggatttt ggaaatcagc ttctggagga atgcatgtca
2700
caggcgggac tttcttcaga gagtgggtgca gcgccagaca ttttgcacat aaggcaccaa
2760
acagcccagg actgccgaga ctctggccgc ccgaaggagc ctgctttggt actatggaac
2820
ttttcttagg ggacacgtcc tcctttcaca gcttctaagg tgtccagtgc attgggatgg
2880
ttttccaggc aaggcactcg gccaatccgc atctcagccc tctcaggag cagtcttcca
2940
tcatgctgaa ttttgtcttc caggagctgc ccctatgggg cggggccgca gggccagcct
3000
tgtttctcta caaacaaca aacaacagc cttgtttctc taacaacaa gggccagcct
3060
tgtttctcta acaacaacac aaacaacag cttgtttctc ctagtccat catgtgtata
3120
caaggaagcc aggaatacag gttttcttgā tgatttgggt ttttaatttg tttttattgc
3180
acctgacaaa atacagttat ctgatgttcc ctcaattatg ttattttaat aaaataaatt
3240
aaatttaggt gtaatggctg gctgttacct ccttttaaag taattctgag ctcaaacctt
3300
gaatgcccc tttgttcacc ctcttcagga gcagaattca agaacaggaa atgtgcccag
3360
agcctaggct gggaatgaat ttgtaattta acctttgtac tctttgtaaa cctctactga
3420
agagttaagt ataaaaatta attaagcaga aagtactcta aactcagcta ataccttaag
3480
taatacattt tataaactat ttatttattt ggtaggtaca gcttttttaa acacaaaaat
3540
agattagata aattccagct tggaacaagc tagtgctggt tcacaagggt gtgctcacc
3600
ttcaattaaa atcaaatga ctacaagact tgccatcagc tctcttcagg accactgctg
3660
ggtcagaatc agaaaccttg ggtgccatga aatttttaca aaatttcaa tcaaagccag
3720
gctttgcagc tagataatag atcacttgag tacgaaccac acatgtaagt gcacgtatat
3780

gtcaatgtgc gaaatggaat gagcttgcac gactgcctta tgaaagcact caaggtgagg
600
ggcctgcaac cagagtgtctg tgcagtgttc agacttctcc acgaacacaa aggtaaaaaa
660
gcacgcttag attggaatac tgatgtgtcg tctttgattg gagaagaact tcaagtagat
720
ttcttgatc atgttccct cacaacacac aactttgtc ggaagacgtt cctgaagctt
780
gccttctgtg acatctgtca gaaattcctg ctcaatggat ttgatgtca gacttgtggc
840
tacaaatttc atgagcactg tagcaccaaa gtacctacta tgtgtgtgga ctggagtaac
900
atcagacaac tcttattgtt tccaaattcc actattgggtg atagtggagt cccagcacta
960
ccttctttga ctatgcgtcg tatgcgagag tctgtttcca ggatgcctgt tagttctcag
1020
cacagatatt ctacacctca cgccttcacc tttaacacct ccagtcctc atctgaaggt
1080
tccctctccc agaggcagag gtcgacatcc acacctaag tccacatggt cagcaccacc
1140
ctgcctgtgg acagcaggat gattgaggat gcaattcgaa gtcacagcga atcagcctca
1200
ccttcagccc tgtccagtag ccccaacaat ctgagcccaa caggctgggtc acagccgaaa
1260
accccggtgc cagcacaaag agagcgggca ccagtatctg ggaccagga gaaaaacaaa
1320
attaggcctc gtggacagag agattcaagc tattattggg aaatagaagc cagtgaagtg
1380
atgtgtcca ctcgattgg gtcaggctct tttggaactg tttataaggg taaatggcac
1440
ggagatgttg cagtaaagat cctaaagggt gtcgaccaa cccagagca attccaggcc
1500
ttcaggaatg aggtggctgt tctgcgcaa acacggcatg tgaacattct gcttttcag
1560
gggtacatga caaaggacaa cctggcaatt gtgaccaggt ggtgcgaggg cagcagcctc
1620
tacaaacacc tgcattgtca ggagaccaag tttcagatgt tccagctaat tgacattgcc
1680
cggcagacgg cttagggat ggactatttg catgcaaaga acatcatcca tagagacatg
1740
aaatccaaca atatatttct ccatgaaggc ttaacagtga aaattggaga ttttggtttg
1800
gcaacagtaa agtcacgtg gagtgggtct cagcagggtg aacaacctac tggctctgtc
1860
ctctggatgg cccagagggt gatccgaatg caggataaca acccattcag tttccagtcg
1920
gatgtctact cctatggcat cgtattgtat gaactgatga cgggggagct tccttattct
1980
cacatcaaca accgagatca gatcatcttc atggtgggcc gaggatatgc ctccccagat
2040
cttagtaagc tatataagaa ctgccccaaa gcaatgaaga ggctggtagc tgactgtgtg
2100
aagaaagtaa aggaagagag gcctcttttt cccagatcc tgtcttccat tgagctgtc
2160

	180		185		190										
Val	Leu	Asp	Tyr	Arg	Arg	Lys	Phe	Ile	Glu	Ala	Ala	Gln	Arg	Tyr	Asn
	195					200						205			
Glu	Leu	Ser	Tyr	Lys	Thr	Ile	Val	His	Glu	Ser	Glu	Arg	Leu	Glu	Ala
	210					215						220			
Leu	Lys	His	Ala	Leu	His	Cys	Thr	Ile	Leu	Ala	Ser	Ala	Gly	Gln	Gln
225					230					235				240	
Arg	Ser	Arg	Met	Leu	Ala	Thr	Leu	Phe	Lys	Asp	Glu	Arg	Cys	Gln	Gln
			245						250				255		
Leu	Ala	Ala	Tyr	Gly	Ile	Leu	Glu	Lys	Met	Tyr	Leu	Asp	Arg	Ile	Ile
			260					265					270		
Arg	Gly	Asn	Gln	Leu	Gln	Glu	Phe	Ala	Ala	Met	Leu	Met	Pro	His	Gln
	275						280					285			
Lys	Ala	Thr	Thr	Ala	Asp	Gly	Ser	Ser	Ile	Leu	Asp	Arg	Ala	Val	Ile
	290					295					300				
Glu	His	Asn	Leu	Leu	Ser	Ala	Ser	Lys	Leu	Tyr	Asn	Asn	Ile	Thr	Phe
305					310					315				320	
Glu	Glu	Leu	Gly	Ala	Leu	Leu	Glu	Ile	Pro	Ala	Ala	Lys	Ala	Glu	Lys
			325					330					335		
Ile	Ala	Ser	Gln	Met	Ile	Thr	Glu	Gly	Arg	Met	Asn	Gly	Phe	Ile	Asp
			340					345					350		
Gln	Ile	Asp	Gly	Ile	Val	His	Phe	Glu	Thr	Arg	Glu	Ala	Leu	Pro	Thr
	355						360					365			
Trp	Asp	Lys	Gln	Ile	Gln	Ser	Leu	Cys	Phe	Gln	Val	Asn	Asn	Leu	Leu
	370					375					380				
Glu	Lys	Ile	Ser	Gln	Thr	Ala	Pro	Glu	Trp	Thr	Ala	Gln	Ala	Met	Glu
385				390					395					400	
Ala	Gln	Met	Ala	Gln											
				405											

<210> 4929

<211> 5907

<212> DNA

<213> Homo sapiens

<400> 4929

```

ntaatcgcg ggcgtttggc gccatcttta gatggcggga gtaagaggaa aacgattgtg
60
aggcgggaac ggctttctgc tgcctttttt ggccccgaa aagggtcagc tggcggggct
120
ttggggcgcg tgccctgagg cgcgagcgc gtttgctacg atgcgggggc tgctcggggc
180
tccgtcccct gggtgggga cgcgccgaat gtgaccgcct cccgctccct caccgcccgc
240
ggggaggagg agcgggcgag aagctgccgc cgaacgacag gacgttgggg cggcctggct
300
ccctcaggta taagtattgt ttaagctgca tcaatggagc acatacagg agcttggaag
360
acgatcagca atggttttgg attcaaagat gccgtgtttg atggctccag ctgcatctct
420
cctacaatag ttcagcagtt tggctatcag cgccgggcat cagatgatgg caaactcaca
480
gatccttcta agacaagcaa cactatccgt gttttcttgc cgaacaagca aagaacagtg
540

```

aaattatata ataattattac cttcgaagaa cttggagctc ttttagagat ccctgcagct
 1020
 aaggcggaag agatagcatt tcaaatgata accgaaggac gtatgaatgg atttattgac
 1080
 cagattgatg gaatagttca ttttgaaaca cgagaagccc tgccaacgtg ggataagcag
 1140
 atccaatcac ttgtttcca agtgaataac cttttggaga aaattagtca aacagcacca
 1200
 gaatggacag cacaagccat ggaagcccag atggctcagt gaatccttgc agaacttctg
 1260
 tgcacatgac atctttttcc atgttgtgca gatcagtttc actatctcca aagcatttgc
 1320
 atcatgacct tatacatttc aatccctttt atgctggatt ccgtttaag aagacattat
 1380
 tagagcagga agtacaagca tttaaaatat gtagttcca tatatttcag ggtctctgtg
 1440
 tattaagcta actcagatgt ttgaaagct ttttctttaa acagaggtga aatatctgtg
 1500
 gctaaaaagt ttgagatttg tgataacttt gtagtcatgt aaaacttaag tgcttcatgc
 1560
 ctctccaaat gtggttattc taataaatgg agaaatgagc caaaaaaag tagtactttg
 1620
 tttttaaaaa aaaaaaaaaa aaaaaaaaaa
 1649

<210> 4928

<211> 405

<212> PRT

<213> Homo sapiens

<400> 4928

Met	Ala	Ala	Val	Arg	Gln	Asp	Leu	Ala	Gln	Leu	Met	Asn	Ser	Ser	Gly
1			5						10					15	
Ser	His	Lys	Asp	Leu	Ala	Gly	Lys	Tyr	Arg	Gln	Ile	Leu	Glu	Lys	Ala
		20					25					30			
Ile	Gln	Leu	Ser	Gly	Ala	Glu	Gln	Leu	Glu	Ala	Leu	Lys	Ala	Phe	Val
	35					40					45				
Glu	Ala	Met	Val	Asn	Glu	Asn	Val	Ser	Leu	Val	Ile	Ser	Arg	Gln	Leu
	50				55					60					
Leu	Thr	Asp	Phe	Cys	Thr	His	Leu	Pro	Asn	Leu	Pro	Asp	Ser	Thr	Ala
65			70						75					80	
Lys	Glu	Ile	Tyr	His	Phe	Thr	Leu	Glu	Lys	Ile	Gln	Pro	Arg	Val	Ile
		85						90					95		
Ser	Phe	Glu	Glu	Gln	Val	Ala	Ser	Ile	Arg	Gln	His	Leu	Ala	Ser	Ile
	100						105					110			
Tyr	Glu	Lys	Glu	Glu	Asp	Trp	Arg	Asn	Ala	Ala	Gln	Val	Leu	Val	Gly
	115					120					125				
Ile	Pro	Leu	Glu	Thr	Gly	Gln	Lys	Gln	Tyr	Asn	Val	Asp	Tyr	Lys	Leu
	130				135					140					
Glu	Thr	Tyr	Leu	Lys	Ile	Ala	Arg	Leu	Tyr	Leu	Glu	Asp	Asp	Asp	Pro
145			150						155					160	
Val	Gln	Ala	Glu	Ala	Tyr	Ile	Asn	Arg	Ala	Ser	Leu	Leu	Gln	Asn	Glu
		165					170						175		
Ser	Thr	Asn	Glu	Gln	Leu	Gln	Ile	His	Tyr	Lys	Val	Cys	Tyr	Ala	Arg

```

      1             5             10             15
Glu Phe Gly Asp Gly Ser Asp Glu Asn Glu Met Glu Glu His Glu Leu
      20             25             30
Lys Asp Glu Asp Gly Lys Asp Ser Asp Glu Ala Glu Asp Ala Glu
      35             40             45
Leu Tyr Asp Asp Leu Tyr Cys Pro Ala Cys Asp Lys Ser Phe Lys Thr
      50             55             60
Glu Lys Ala Met Lys Asn His Glu Lys Ser Lys Lys His Arg Glu Met
      65             70             75             80
Val Ala Leu Leu Lys Gln Gln Leu Glu Glu Glu Glu Glu Asn Phe Ser
      85             90             95
Arg Pro Gln Ile Asp Glu Asn Pro Leu Asp Asp Asn Ser Glu Glu Glu
      100            105            110
Met Glu Asp Ala Pro Lys Gln Lys Leu Ser Lys Lys
      115            120

```

<210> 4927

<211> 1649

<212> DNA

<213> Homo sapiens

<400> 4927

```

atccaccgct gagctgggag aaagatggcg gccgtgcgac aggatttggc ccagctcatg
60
aattcgagcg gctctcataa agatctggct ggcaagtatc gtcagatcct ggaaaaagcc
120
attcagttat ctggagcaga acaactagaa gctttgaaag cttttgtgga agcaatggta
180
aatgagaatg tcagtctcgt gatctcgagg cagttgctga ctgatttttg cacacatctt
240
cctaacttgc ctgatagcac agccaaagaa atctatcact tcaccttgga aaagatccag
300
cctagagtca tttcatttga ggagcagggt gcttcataa gacagcatct tgcatttata
360
tatgagaaag aagaagattg gagaaatgca gcccaagtgt tgggtgggaat tcctttggaa
420
acaggacaaa aacagtacaa tgtagattat aaactggaga cttacttgaa gattgctagg
480
ctatatctgg aggatgatga tccagtccag gcagaggctt acataaatcg agcatcggtg
540
cttcagaatg aatcaaccaa tgaacaatta cagatacatt ataaggatat ctatgcacgt
600
gttcttgatt atagaagaaa attcattgaa gctgcacaaa ggtacaatga gctctcttac
660
aagacaatag tccacgaaag tgaagacta gaggccttaa aacatgcttt gcactgtacg
720
atcttagcat cagcaggaca gcagcgttct cggatgctgg ctaccctttt taaggatgaa
780
aggtgccagc aacttgctgc ttatgggata ctagagaaaa tgtatctaga caggatcatc
840
agaggggaacc agcttcaaga atttgctgcc atgctgatgc ctcacaaaaa agcaactaca
900
gctgatgggt ccagcatctt ggacagagct gttattgaac acaatttggt gtctgcaagc
960

```

50		55		60
Ser Met Ala Ser Ile Gly Lys Gly Pro Leu Pro Leu Ser Phe Ser Arg				
65	70	75	80	
Ala Gly Gly Trp Pro Pro Thr Lys Ala Lys Asn Ser Ala Ser Ser Ser				
	85	90	95	
Ser Ser Leu Ala Pro Ser Ser Gly Ile Ile Arg Pro Ser Gly Glu Arg				
	100	105	110	
Ser Thr Ser Arg Pro Ser Trp Arg Ala Ala Ala Ala Pro Leu Pro Gly				
	115	120	125	
Gly Pro Gly Gly Pro Ser Ser Cys Ala Ser Ser Arg Leu Asp Ala Arg				
	130	135	140	
Thr Thr Cys Pro Gln Ala Arg Pro Cys Pro Ala Pro Ser Pro Gly Ser				
145	150	155	160	
Val Ala Ala His Ser Pro Phe Leu Ser Pro Ala Leu Leu Val Gly Ala				
	165	170	175	
Leu Arg Pro Val Asp Pro Glu Pro Ser Leu Pro Cys Leu Ala Val Pro				
	180	185	190	
Leu Pro Pro Arg Ala Ser Gly Ala Ala Ala Pro Xaa Ser Ala Ala Ser				
	195	200	205	
Trp Ala Arg Arg Gly Leu Pro Ser Arg Asn Tyr Asn Ser Arg Gln Ile				
	210	215	220	
Ser Gln Gly Glu Asp Lys Met Thr Lys Arg Lys Lys Leu Arg Thr Ser				
225	230	235	240	
Ala Pro Leu Met Arg Lys Gln Asp Leu Pro Ala Gly Ser Ser Val				
	245	250	255	

<210> 4925

<211> 374

<212> DNA

<213> Homo sapiens

<400> 4925

```

gccaatattgg agaaagagct ccaggagatg gaggcacggt acgagaagga gtttggagat
60
ggatcgggatg aaaatgaaat ggaagaacat gaactcaaag atgaggagga tggtaaagac
120
agtgatgagg ccgaggacgc tgagctctat gatgaccttt actgcccagc atgtgacaaa
180
tcgttcaaga cagaaaaggc catgaagaat cacgagaagt caaagaagca tcgggaaatg
240
gtggccttgc taaaacaaca gctggaggag gaagaagaaa atttttcaag acctcaaatt
300
gatgaaaatc cattagatga caattctgag gaagaaatgg aagatgcacc aaaacaaaag
360
ctttctaaaa aaaa
374

```

<210> 4926

<211> 124

<212> PRT

<213> Homo sapiens

<400> 4926

Ala Asn Leu Glu Lys Glu Leu Gln Glu Met Glu Ala Arg Tyr Glu Lys

290 295 300
 Thr Gly Glu Val Glu Glu Met Thr Glu Lys Pro Glu Met Thr Ala Glu
 305 310 315 320
 Glu Lys Gln Thr Leu Leu Lys Arg Arg Leu Leu Ala Glu Lys Leu Lys
 325 330 335
 Glu Glu Val Ile Asn Lys
 340

<210> 4923

<211> 765

<212> DNA

<213> Homo sapiens

<400> 4923

tctccagccc cggatgaggg gcctcaggct tcggctgggc cacaggaggt ggggtctctg
 60
 aagccttctg ctctnctcc aaggacctca tttagctccg ccagcaggtc atcatcagcc
 120
 tccaagtcgt cctcatccgt cccctcctcc tcctcctcat ccgggtctct catgcacagg
 180
 ctggccatct tctcaatggc ctccatcggc aagggaacctt tgcctttgag cttctccagg
 240
 gctggggggt ggcccccgac caaagccaag aactcagcct ccagttcttc atcgttagcc
 300
 ccgtcctcag ggatcatcag gccatctggg gagaggtcaa ccagcaggcc cagctggcgg
 360
 gcggccgcgg cgctctgcc cgggggtccc gggggtcctt cctcttgtgc atcttcaagg
 420
 ctggatgccc ggaccacctg cccccaagcc cggccttgcc ctgccccttc cccgggctct
 480
 gtcgcccgcg actcgccctt cctgagtcct gactcctcg tcggcgccct gcggccggtc
 540
 gatcccagac cctcgcttcc ctgcttgccc gtcccacttc cgcctcgggc ctcgggcgcc
 600
 gccgcacctn ggagcgcggc cagctgggct cgcgagggtc tgccgagccg aaactacaac
 660
 tcccggcaga tttctcaagg ggaagataaa atgactaaga ggaagaagct gcggacctca
 720
 gctcccctga tgaggaaaca ggatctcctt gccggctcct ccgtc
 765

<210> 4924

<211> 255

<212> PRT

<213> Homo sapiens

<400> 4924

Ser Pro Ala Pro Asp Glu Gly Pro Gln Ala Ser Ala Gly Pro Gln Glu
 1 5 10 15
 Val Gly Ser Leu Lys Pro Ser Ala Pro Xaa Pro Arg Thr Ser Phe Ser
 20 25 30
 Ser Ala Ser Arg Ser Ser Ser Ala Ser Lys Ser Ser Ser Val Pro
 35 40 45
 Ser Ser Ser Ser Ser Ser Gly Ser Leu Met His Arg Leu Ala Ile Phe

actaaacaga tacaaaatat ggagcagaaa ggaaaaccca ctggggaggt agaggaaatg
 1080
 acagagaaac cagaaatgac agcagaggag aagcaaacat tactaaagag gagattgctt
 1140
 gcagagaaac tcaaagaaga agttattaat aagtaataat taagaacaat ttaacaaaaa
 1200
 ggaagttaa attgtcttaa aaataaatta ttagtcctt acactgaaaa aaaaaaaaaa
 1260
 aaaaaataaa aa
 1272

<210> 4922

<211> 342

<212> PRT

<213> Homo sapiens

<400> 4922

Met	Ala	Ala	Glu	Glu	Glu	Asp	Glu	Val	Glu	Trp	Val	Val	Glu	Ser	Ile
1			5						10				15		
Ala	Gly	Leu	Leu	Arg	Gly	Pro	Asp	Trp	Ser	Ile	Pro	Ile	Leu	Asp	Phe
		20						25					30		
Val	Glu	Gln	Lys	Cys	Glu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu
		35					40					45			
Thr	Tyr	Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu
	50					55					60				
Leu	Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln
65					70				75					80	
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala	Ile
				85					90					95	
Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys	Ala	Met
		100						105					110		
Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala	Ile	Arg	Ile	Ile
		115					120						125		
Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	Asp	Gly	Ser	Asp
	130					135					140				
Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	Ile	Leu	Arg	Glu	Val
145					150					155				160	
Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	Glu	Glu	Glu	Arg	Lys	Arg
				165					170					175	
Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	Glu	Glu	Pro	Thr	Val	His	Ser
			180					185					190		
Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	Ser	Gln	Gly	Asp	Gly	Glu	His	Phe
		195					200					205			
Ala	His	Pro	Pro	Ser	Glu	Val	Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile
	210						215					220			
Glu	Pro	Leu	Gly	Arg	Lys	Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro
225					230					235				240	
Gln	Lys	Gly	Leu	Lys	Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly
				245					250					255	
Pro	Ile	Ala	Asn	Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg
			260					265					270		
Glu	His	Tyr	Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys
		275					280						285		
Asp	Met	Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro

4094

gaagtatctc ctttaaatgt caccagtgtc acaaattggag cacatcctga agccacttca
 420
 gagcaaccac agcagaacag tacacaagac tctggactac aggaaagtga agtatcagca
 480
 gaaaatatct taactgtagc caaggatcca agatatgcca gatattctcaa aatgggtcaa
 540
 gtgggtgtac cagtgtatggc aataagaaac aaaatgatat cagaaggact agaccagat
 600
 cttcttgaga ggccagatgc tccagtgcct gatggcgaaa gtgagaaaac tgtagaagaa
 660
 agttcagata gcgaatcttc ttttagtgat taagcttaat tttgataaga attacatatg
 720
 catgcatagg ggtacattta cattctgtaa gagattgagc ctgaactctc ttagtcataa
 780
 aaacatcaaa tggccacatg tccactacca agcttcttct atgttaaaaa aataataata
 840
 aagcagtttt aacctgcccc gtatgtcttg ttgctaaaat aanggccctc aaattgaaaa
 900
 ttnggatacc ctaaataaag taccaattag tgctccaaat actaagatag aatatttttag
 960
 agatgcaatg agcaattaca gtcaggcacg ggttgtcacg cctgtaatcc cagcactttg
 1020
 ggaggccgag gcgagtggat aacctgaggt caggagttca agaccagcct ggccaacatg
 1080
 gtgaaacctc catctctact aaaaatacaa aaagtagctg ggcgtggtga caaaaattag
 1140
 ctgggcgtag tggcaggtgc ctgtaatccc agctactcgg gaagctgagg caggagaatc
 1200
 acttgaaccc agaaggtaaa ggtttcagtg agctgagatt gcgtcattgc actccagcca
 1260
 tggcgacaag agtgaaactc tgtcttaaaa ataaaaagag atgcaatgag caattttaaa
 1320
 tgaagtcagt gtgagtttag tgatcaatag tagaccaat gc
 1362

<210> 4920

<211> 194

<212> PRT

<213> Homo sapiens

<400> 4920

Met	Asp	Glu	Asp	Gly	Leu	Pro	Leu	Met	Gly	Ser	Gly	Ile	Asp	Leu	Thr
1				5				10					15		
Lys	Val	Pro	Ala	Ile	Gln	Gln	Lys	Arg	Thr	Val	Ala	Phe	Leu	Asn	Gln
			20				25					30			
Phe	Val	Val	His	Thr	Val	Gln	Phe	Leu	Asn	Arg	Phe	Ser	Thr	Val	Cys
		35				40				45					
Glu	Glu	Lys	Leu	Ala	Asp	Leu	Ser	Leu	Arg	Ile	Gln	Gln	Ile	Glu	Thr
	50				55				60						
Thr	Leu	Asn	Ile	Leu	Asp	Ala	Lys	Leu	Ser	Ser	Ile	Pro	Gly	Leu	Asp
65				70					75				80		
Asp	Val	Thr	Val	Glu	Val	Ser	Pro	Leu	Asn	Val	Thr	Ser	Val	Thr	Asn
			85				90						95		
Gly	Ala	His	Pro	Glu	Ala	Thr	Ser	Glu	Gln	Pro	Gln	Gln	Asn	Ser	Thr

65					70					75				80
Ser	Glu	Ala	Asp	Pro	Ala	Pro	Leu	Leu	Gly	Gly	Arg	Leu	Leu	Leu
				85					90				95	Met
Asp	Val	Val	Asp	Ala	Glu	Gln	Glu	Ala	Pro	Ala	Asp	Gly	Trp	Ile
				100				105					110	Ala
Val	Ala	Tyr	Val	Gly	Lys	Glu	Gln	Ala	Ala	Gln	Phe	His	Gln	Glu
		115					120					125		Asn
Lys	Gly	Ser	Gly	Pro	Gln	Ala	Tyr	Pro	Lys	Ala	Leu	Val	Gln	Gln
	130					135					140			Met
Arg	Arg	Ala	Leu	Phe	Leu	Gly	Ala	Ser	Ala	Leu	Leu	Leu	Leu	Ile
	145				150					155				Leu
Asn	His	Asn	Val	Val	Arg	Glu	Leu	Asp	Ile	Ser	Gln	Leu	Leu	Leu
			165						170					Arg
Pro	Val	Ile	Val	Leu	His	Tyr	Ser	Ser	Asn	Val	Thr	Lys	Leu	Leu
		180						185					190	Asp
Ala	Leu	Leu	Gln	Arg	Thr	Gln	Ala	Thr	Ala	Glu	Ile	Thr	Ser	Gly
		195					200					205		Glu
Ser	Leu	Ser	Ala	Asn	Ile	Glu	Trp	Lys	Leu	Thr	Leu	Trp	Thr	Thr
	210					215					220			Cys
Gly	Leu	Ser	Lys	Asp	Gly	Tyr	Gly	Gly	Trp	Gln	Asp	Leu	Val	Cys
	225				230					235				Leu
Gly	Gly	Ser	Arg	Ala	Gln	Glu	Gln	Lys	Pro	Leu	Gln	Gln	Leu	Trp
			245						250				255	Asn
Ala	Ile	Leu	Leu	Val	Ala	Met	Leu	Leu	Cys	Thr	Gly	Leu	Val	Gln
		260						265					270	
Ala	Gln	Arg	Gln	Ala	Ser	Arg	Gln	Ser	Gln	Arg	Glu	Leu	Gly	Gln
	275						280					285		
Val	Asp	Leu	Phe	Lys	Arg	Arg	Val	Val	Arg	Arg	Leu	Ala	Ser	Leu
	290					295					300			Lys
Thr	Arg	Arg	Cys	Arg	Leu	Ser	Arg	Ala	Ala	Gln	Gly	Leu	Pro	Asp
	305				310					315				Pro
Gly	Ala	Glu	Thr	Cys	Ala	Val	Cys	Leu	Asp	Tyr	Phe	Cys	Asn	Lys
			325						330				335	Gln
Ala	Ser	Ala	Pro	Val	Ala	Pro	Gly	Ala	Ala	Leu				
			340					345						

<210> 4919

<211> 1362

<212> DNA

<213> Homo sapiens

<400> 4919

nccgaggcgg gcacttgggg ggaaagtga gacgtgatta ccgggttggg cgggccccat

60

ctgggagggg tttgtgggtg aactcggggt ccaccgcccg ctgaggagat ggatgaggac

120

gggtcttcctc tcatgggggc aggcatagac ctgaccaagg tgccagctat tcaacagaaa

180

agaacggtgg cttttctaaa ccaatttggtg gtgcacactg tacagttcct caaccgcttt

240

tctacagttt gtgaggagaa actggcagac ctttcacttc gtatccaaca aattgaaaca

300

actctcaata ttttagatgc aaagttgtca tctatcccag gcctagatga tgtcacagtt

360

gccggggcgg acggcagcga gccggcgccc gggggcgggc gggggcgagc ccgcgccgtg
 480
 cgggtggacg tgagactgcc gcgccaggac gctctggtcc tggagggcgt caggatcggc
 540
 tccgaagccg acccggcgcc cctgctgggc ggtcgtctgc tgctgatgga tgcgtggat
 600
 gctgagcagg aggcacccgc agatggctgg attgcagtgg catatgtggg caaggagcag
 660
 gcggcccagt tccaccagga gaataagggc agtggcccgc aggcctatcc caaggccctg
 720
 gtccagcaga tggggcgggc cctcttcctg ggtgcctctg ccctgcttct tctcatcctg
 780
 aaccacaacg tggtcgaga gctggacata tccagcttc tgctcaggcc agtgatcgtc
 840
 ctccattatt cctccaatgt caccaagctg ttggatgcat tgctgcagag gaccaggcc
 900
 acggctgaga tcaccagcgg agagtcctctg tctgccata tcgagtggaa gttgacctg
 960
 tggaccacct gtggcctctc caaggatggc tatggaggat ggcaggactt ggtctgcctt
 1020
 ggaggcagtc gtgcccagga gcagaaacct ctgcagcagc tgtggaacgc catcctgctg
 1080
 gtggccatgc tcctgtgcac aggcctcgtg gtccaggccc agcggcaggc gtcgcggcag
 1140
 agccagcggg agctcggagg ccagggtggac ctgtttaagc gccgcgtggt gcggagactg
 1200
 gcacccctca agacacggcg ctgccggctg agcagggcag cgcagggcct ccagatccg
 1260
 ggtgctgaga cctgtgcggt gtgcctggac tacttctgca acaaacaggc tagtgccccg
 1320
 gtggctccgg gtgctgcct gtaagcacga gtttcaccga gactgtgtgg acccctggct
 1380
 gatgctccag cagacctgcc cactgtgcaa attcaacgtc ctgggtgagc accaggggtg
 1440
 gggtcctcgg gctactctg cctgtctctc acctgatgcc tctctcctg ttcttcttcc
 1500
 cctccctcgc agggaaccgc tactccgatg attagctgcc cagc
 1544

<210> 4918

<211> 347

<212> PRT

<213> Homo sapiens

<400> 4918

Met Gly Pro Ala Ala Arg Pro Ala Leu Arg Ser Pro Pro Pro Pro Pro
 1 5 10 15
 Pro Pro Pro Pro Ser Pro Leu Leu Leu Leu Leu Pro Leu Leu Pro Leu
 20 25 30
 Trp Leu Gly Leu Ala Gly Pro Gly Ala Ala Ala Asp Gly Ser Glu Pro
 35 40 45
 Ala Ala Gly Ala Gly Arg Gly Gly Ala Arg Ala Val Arg Val Asp Val
 50 55 60
 Arg Leu Pro Arg Gln Asp Ala Leu Val Leu Glu Gly Val Arg Ile Gly

ggagcactgc ccacaggccg agccggggcc tcccgaaga ggaaggaggt gccctcaagg
 720
 ctacggacct ggggtcccgg tggtagacgc ccacggggct caggcctaaa gaggccgaga
 780
 gggcctcggg gaccagtgcc agccccacgc tgagcagcac aggctgcccc accgtgggct
 840
 cccgatctc tctctggatc accgagacct cgcaggagg gtcacaggg gcgccaggcc
 900
 cagggccacc acagtggaag gtctccctt cccaggcac gtaatcttcc aggtcagcca
 960
 gtgtcagcat gcggccgttg tgcgtgagga tcttggggc acgatcccca aggtgtgtg
 1020
 tgtcctggga ctctccgctc acaaagagag tctccgtctt cccctcttcc ctagtcccgc
 1080
 ctctccatc gtgccctcct cctccaggt gcccatgcca gaacggagag agaactagtt
 1140
 ctctctctct ctctctc
 1157

<210> 4916

<211> 59

<212> PRT

<213> Homo sapiens

<400> 4916

Met	Arg	Val	Gln	Lys	Asp	Cys	Val	Gln	Gly	Ala	Leu	Pro	Thr	Gly	Arg
1				5					10					15	
Ala	Gly	Ala	Ser	Arg	Lys	Arg	Lys	Glu	Val	Pro	Ser	Arg	Leu	Arg	Thr
			20					25					30		
Trp	Gly	Pro	Gly	Gly	Asp	Ala	Pro	Arg	Gly	Ser	Gly	Leu	Lys	Arg	Pro
		35					40					45			
Arg	Gly	Pro	Arg	Gly	Pro	Ser	Ala	Ala	Pro	Arg					
	50						55								

<210> 4917

<211> 1544

<212> DNA

<213> Homo sapiens

<400> 4917

cgaagcacct cctctctctg actttccgcc ttcccgtctc gaccccggtt ttgcccctct
 60
 ccagctccct cagccgcggg cacctgagct ctccgcggcc accagggggc gcccgcggcc
 120
 cagtctgggc gcgagagccg ccaagcgcgc actccgttcc tcttggtgcc ccgccccgtc
 180
 cggccgcggc cccgcccctc ccggcgcccc gccccgtccg gcagcggcct cgtccctcc
 240
 gatccccccc gcgcccggga cccctggccc cactgttggg ccagctcgcc gggtcgggcc
 300
 atgggccccg ccgctcgccc cgcgtgaga tcgcccgcgc cgcctccgcc gccgcctccg
 360
 tctccgtctc tgctgtctgt gccctgtctg ccgtgtggc tgggcctggc ggggcccggg
 420

```
<210> 4915
<211> 1157
<212> DNA
<213> Homo sapiens
```

```

<400> 4915
gcacaggaag ctgctttatt cttgctgaga gacaggggct gctgccca cacagacct
60
gtgtccaccc tgcagaaaag gccaggaggg cctgcagagc tgggaagcgc cacccaaggg
120
tctcagtcac caagactgca ggagaggcaa ggccatgtca ggccctggcag ctgtggctgg
180
ggccaggagg gagggaccag gcccatgtgg gaacaggaca aatgcccagg gccacatcct
240
tcgtccacag tcctgaggct cctgccaggc tgacaggaaa cagcccagag ctgaggtctt
300
tgagccggtc attccaacat tgcaagcacc acccagtcct cctggctgaa gttgagtga
360
gtaagaaggg ccctgggcca gggacaggga gggccctcag gaggtccca gggctgctgc
420
tgaggccggg cagcgtccta ggccccaagg acactccttt ctccccgtg cccaagcca
480
ccatggcagc agcatcaggg ctgtgccgcc tcatcccat ccctgtctgg gcagatgtga
540
agggtgaccg tctccccac tgtccgaag ttgacggctt gggtggaag ctctgtggtg
600
aagctgtctt ggccactgtc cgcagaacgc cggatgcggg tgcagaaaga ctgcgtccag
660

```

cgccctagtgc cgggccggcc tcagcccgcc tctgcctggt gctccctgca gtgccttctc
 2040
 catggccccg ccctccccgc gtgtgcgcca ggcttggggg ccccgaggaga
 2090

<210> 4914

<211> 529

<212> PRT

<213> Homo sapiens

<400> 4914

Met	Ser	Glu	His	Val	Glu	Pro	Ala	Ala	Pro	Gly	Pro	Gly	Pro	Asn	Gly
1				5					10					15	
Gly	Gly	Gly	Gly	Pro	Ala	Pro	Ala	Arg	Gly	Pro	Arg	Thr	Pro	Asn	Leu
			20					25					30		
Asn	Pro	Asn	Pro	Leu	Ile	Asn	Val	Arg	Asp	Arg	Leu	Phe	His	Ala	Leu
		35					40					45			
Phe	Phe	Lys	Met	Ala	Val	Thr	Tyr	Ser	Arg	Leu	Phe	Pro	Pro	Ala	Phe
	50					55					60				
Arg	Arg	Leu	Phe	Glu	Phe	Phe	Val	Leu	Leu	Lys	Ala	Leu	Phe	Val	Leu
65					70					75				80	
Phe	Val	Leu	Ala	Tyr	Ile	His	Ile	Val	Phe	Ser	Arg	Ser	Pro	Ile	Asn
				85					90					95	
Cys	Leu	Glu	His	Val	Arg	Asp	Lys	Trp	Pro	Arg	Glu	Gly	Ile	Leu	Arg
			100					105					110		
Val	Glu	Val	Arg	His	Asn	Ser	Ser	Arg	Ala	Pro	Val	Phe	Leu	Gln	Phe
		115					120					125			
Cys	Asp	Ser	Gly	Gly	Arg	Gly	Ser	Phe	Pro	Gly	Leu	Ala	Val	Glu	Pro
	130					135					140				
Gly	Ser	Asn	Leu	Asp	Met	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Leu	Thr	Met
145					150					155				160	
Glu	Met	Phe	Gly	Asn	Ser	Ser	Ile	Lys	Phe	Glu	Leu	Asp	Ile	Glu	Pro
			165					170					175		
Lys	Val	Phe	Lys	Pro	Pro	Ser	Ser	Thr	Glu	Ala	Leu	Asn	Asp	Ser	Gln
		180						185					190		
Glu	Phe	Pro	Phe	Pro	Glu	Thr	Pro	Thr	Lys	Val	Trp	Pro	Gln	Asp	Glu
	195						200					205			
Tyr	Ile	Val	Glu	Tyr	Ser	Leu	Glu	Tyr	Gly	Phe	Leu	Arg	Leu	Ser	Gln
	210					215				220					
Ala	Thr	Arg	Gln	Arg	Leu	Ser	Ile	Pro	Val	Met	Val	Val	Thr	Leu	Asp
225					230					235				240	
Pro	Thr	Arg	Asp	Gln	Cys	Phe	Gly	Asp	Arg	Phe	Ser	Arg	Leu	Leu	Leu
			245					250					255		
Asp	Glu	Phe	Leu	Gly	Tyr	Asp	Asp	Ile	Leu	Met	Ser	Ser	Val	Lys	Gly
		260						265					270		
Leu	Ala	Glu	Asn	Glu	Glu	Asn	Lys	Gly	Phe	Leu	Arg	Asn	Val	Val	Ser
	275						280					285			
Gly	Glu	His	Tyr	Arg	Phe	Val	Ser	Met	Trp	Met	Ala	Arg	Thr	Ser	Tyr
	290					295				300					
Leu	Ala	Ala	Phe	Ala	Ile	Met	Val	Ile	Phe	Thr	Leu	Ser	Val	Ser	Met
305					310					315				320	
Leu	Leu	Arg	Tyr	Ser	His	His	Gln	Ile	Phe	Val	Phe	Ile	Val	Asp	Leu
			325					330					335		
Leu	Gln	Met	Leu	Glu	Met	Asn	Met	Ala	Ile	Ala	Phe	Pro	Ala	Ala	Pro

ccggcccccg cgcgcggggc tcgcaccccc aatctcaacc ccaaccccct catcaacgtg
420
cgcgaccggc tcttccacgc gctgttcttc aagatggctg tcacctattc gcggctcttc
480
ccgccccct tccgcgctct ctteaggttc ttctgtgtgc tcaaggccct gtttgtgtc
540
ttcgtcctgg cctacatcca catcgtcttc tcccgtctgc ccatcaactg cctggagcat
600
gtgcgtgaca agtggccgcg tgagggcatc ctgcgtgtgg aagtgcggca caactcgagc
660
cgcgcgcccc tcttcctaca gttctgtgac agcggcggcc gcgggagctt cccgggcctg
720
gccgtggaac caggcagcaa cctggacatg gaagatgagg aggaggaaga gctgaccatg
780
gagatgtttg ggaacagctc catcaagttt gagctggaca tcgagcccaa ggtgttcaag
840
ccgccgagta gcacagaggc cctgaatgac agccaggagt tccccttccc cgagacgccc
900
accaaagtgt ggccgcagga cgagtacatc gtggagtact cactagagta tggcttcctt
960
cgctgtctgc aggccacccg ccagcgctct agcatccccg tcatggtggt caccctggac
1020
cccacgcggg accagtgtt cggggaccgc ttcagccgcc tgcgtctgga tgagttcctg
1080
ggctacgatg acatcctcat gtccagcgtg aagggcctgg ccgagaacga ggagaacaag
1140
ggcttcctgc ggaatgtggt gtcgggcgag cactaccgct ttgtgagcat gtggatggcg
1200
cggacgtcct acctggccgc cttegccatc atggtcatct tcacgctgag cgtgtccatg
1260
ctgctgcggt actcacacca ccagatcttc gtcttcatcg tggacctgct gcagatgctg
1320
gagatgaaca tggccatcgc ctccccgcga gcgcccctgc tgaccgtcat cctggccctc
1380
gtcgggatgg aggccatcat gtcggagttc ttcaacgaca ccaccaccgc cttctacatc
1440
atcctcatcg tgtggctcgc ggaccagtat gacgccatct gctgccacac cagcaccagc
1500
aagcggcatt ggctgcggtt cttctatctc taccatttcg cttctatgc ctatcactac
1560
cgcttcaatg ggcagtatag cagcctggcc ctggtcacct cctggctctt catccagcat
1620
tccatgatct acttcttcca ccactatgag ctgcctgcc aacctgcagca ggtccgcac
1680
caggagatgc tgcttcaggc gccgccactg ggccccggga ccccccacgc gctgcccgat
1740
gacatgaaca acaactcggg cgcgccggct acagcccctg actctgccgg ccagcccccc
1800
gccctgggccc ccgtgtttga gctggtcagc aaggagaggg ggtgggggtc cgcggaaggt
1860
tctggagggg tcttggtagg tctgcagtga accgtctga ggatggagtg gggccccatg
1920
gtgcaggtct ctgagcaagg cggaggtgtg gaggagaggc cggcttgggg tggggcctcg
1980


```
<210> 4913
<211> 2090
<212> DNA
<213> Homo sapiens
```

```
<400> 4913
gtgccaatat gcaaaagagg tggcccagat gcaggcccgc cccttgagc ggccgaggtta
60
gggggtgagg cctccgcggg cgccgctggc atcccagcgt tctctgcggg cgcagggggg
120
ccgctcttgc ccggcgctggc gactcgctag cgtcagcagc gccgcagccg gacgagaaaag
180
cggaagatgg cggcgggcggc cgggaggccg tgaggagagc ggcggtgcg agggcgggccg
240
atggcgggccg ggaggcgccc tcggacactt gcgggtcggt agggcgcgac gctgggaggc
300
atgtcggagc acgtggagcc cgcagctccg gggcccgggc ccaacggcgg cggcgggcggc
360
```

cacgtgctca tgcacatgat gctggaagct ggcgccgaag ccaatctcat ggatatcaac
 1260
 ggctgtgctg ccattccagta cgtgctgaag gtcacctccg tgcgccctgc tgcccagcct
 1320
 gagatctgct accagctcct gttgaaccat ggggctgccc gaatatatccc tccacagttc
 1380
 cataaggtga tacaggcctg ccattcttgt cctaaagcaa ttgaagttgt agtcaatgcc
 1440
 tatgaacaca tcagatggaa cacaaagtgg agaagagcta tccccgatga tgacttggag
 1500
 gtaaataatc gattcccttc taatagtttt cactatcaag tacttccaga ctgctctaga
 1560
 agtacagaaa attgtaacaa aaaagttggt ttgagaatg cctttaaagc gtactcaa
 1620
 gcaatgagac aaagggttat aaaatgcagg ttgagagtt aatatttcca tcaaatatgt
 1680
 ggcattaagg agtgtcttgg ggaattcctc catttaaggg caagttgaat taagtatata
 1740
 aaggtggcag ttttcctttc ttctcattaa tttagatgag ttaaatagata acatttggaa
 1800
 ttgcttatat agcattttta ccagaatatt aaagcgtttt gtgtagatta tttcatttac
 1860
 tt
 1862

<210> 4912

<211> 453

<212> PRT

<213> Homo sapiens

<400> 4912

Met	Asp	Gly	Thr	Thr	Ala	Pro	Val	Thr	Lys	Ser	Gly	Ala	Ala	Lys	Leu
1				5					10					15	
Val	Lys	Arg	Asn	Phe	Leu	Glu	Ala	Leu	Lys	Ser	Asn	Asp	Phe	Gly	Lys
			20					25					30		
Leu	Lys	Ala	Ile	Leu	Ile	Gln	Arg	Gln	Ile	Asp	Val	Asp	Thr	Val	Phe
		35				40					45				
Glu	Val	Glu	Asp	Glu	Asn	Met	Val	Leu	Ala	Ser	Tyr	Lys	Gln	Gly	Tyr
	50				55						60				
Trp	Leu	Pro	Ser	Tyr	Lys	Leu	Lys	Ser	Ser	Trp	Ala	Thr	Gly	Leu	His
65					70					75				80	
Leu	Ser	Val	Leu	Phe	Gly	His	Val	Glu	Cys	Leu	Leu	Val	Leu	Leu	Asp
			85					90					95		
His	Asn	Ala	Thr	Ile	Asn	Cys	Arg	Pro	Asn	Gly	Lys	Thr	Pro	Leu	His
			100					105					110		
Val	Ala	Cys	Glu	Met	Ala	Asn	Val	Asp	Cys	Val	Lys	Ile	Leu	Cys	Asp
		115					120				125				
Arg	Gly	Ala	Lys	Leu	Asn	Cys	Tyr	Ser	Leu	Ser	Gly	His	Thr	Ala	Leu
	130				135						140				
His	Phe	Cys	Thr	Thr	Pro	Ser	Ser	Ile	Leu	Cys	Ala	Lys	Gln	Leu	Val
145					150					155				160	
Trp	Arg	Val	Thr	Gln	Val	Asn	His	Met	Leu	Gly	Asn	Ser	Leu	Val	Asn
			165					170					175		
Glu	Val	Glu	His	Val	Thr	Gln	Val	Asn	His	Met	Leu	Gly	Asn	Ser	Leu

```

      370              375              380
Phe Thr Val Ser Gly Ile Gln Val Arg Tyr Met Lys Ile Ile Glu Lys
385              390              395              400
Ser Gly Tyr Gln Ala Leu Pro Trp Val Arg Tyr Ile Thr Gln Ser Gly
      405              410              415
Asp Tyr Gln Leu Arg Thr Ser
      420

<210> 4911
<211> 1862
<212> DNA
<213> Homo sapiens

<400> 4911
tataagaaat aattgtgaca tttcatgcct ggaaatgtat cacgggggct ttcgttcata
60
ttgacactat atattactga atggatcagt taatatataa ccagtttaaa ggacctgaaa
120
atgtagtgc agccaagaag gatattttga agtttgaaat gatccctata taaatagaac
180
ggatcagcat aactttggga taaaattagc cgacagtttg tggactctcc agcatgcgcc
240
tgtttgctcg gtgctgttct ctcgataaat cacaacaaag cttccagagg gagaggaagg
300
atggacggca ccaactgccc tgtcactaaa tctggagctg ccaagttagt taagagaaat
360
ttccttgagg cgctaaagtc caatgacttc ggaaaattga aggctatatt gatccaaagg
420
caaatagatg tggacactgt ttttgaagtc gaagatgaga atatggtttt ggcatcttat
480
aaacaagggt actggttgcc tagctataaa ttgaagtctt cctggggccac aggcctccat
540
ctctctgtct tgtttgacca tgtggaatgt cttctggtgc tactggacca caatgttaca
600
atcaactgta gaccaatgg gaaaaccctt cttcacgtgg cttgtgaaat ggccaatgtg
660
gattgtgtta agatcctctg tgatcgtggg gcaaagctca attgctactc ctttaagtga
720
cacacagctt tgcacttttg tacaactcca agttccattc tctgtgcca gcaattggtt
780
tggagagtga cacaagtcaa ccacatgtta ggaaattccc tggatcaatga agtggaaacat
840
gtgacacaag tcaaccacat gttaggaaat tccttggtca atgaagtgga acatggggcg
900
aatgtgaaca tgaagaccaa caaccaagat gaggagacgc ccttgccacac ggctgcccac
960
ttcggccttt cggagctggt ggccttctac gtggaacacg gggccatagt ggacagcgtg
1020
aatgcccaca tggagacccc cctggccatc gccgcctact gggccctccg ctttaaggag
1080
caggagtaca gcacggagca ccacctggtc tgccgcatgc tgcttgacta caaagccgaa
1140
gtcaatgccc gagatgacga ctttaaatct ccctccaca aggcagcctg gaactgtgac
1200

```

<210> 4910
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 4910

```

Met Ser Ala Ser Ala Val Tyr Val Leu Asp Leu Lys Gly Lys Val Leu
 1           5           10           15
Ile Cys Arg Asn Tyr Arg Gly Asp Val Asp Met Ser Glu Val Glu His
 20           25           30
Phe Met Pro Ile Leu Met Glu Lys Glu Glu Glu Gly Met Leu Ser Pro
 35           40           45
Ile Leu Ala His Gly Gly Val Arg Phe Met Trp Ile Lys His Asn Asn
 50           55           60
Leu Tyr Leu Val Ala Thr Ser Lys Lys Asn Ala Cys Val Ser Leu Val
 65           70           75           80
Phe Ser Phe Leu Tyr Lys Val Val Gln Val Phe Ser Glu Tyr Phe Lys
 85           90           95
Glu Leu Glu Glu Glu Ser Ile Arg Asp Asn Phe Val Ile Ile Tyr Glu
 100          105          110
Leu Leu Asp Glu Leu Met Asp Phe Gly Phe Pro Gln Thr Thr Asp Ser
 115          120          125
Lys Ile Leu Gln Glu Tyr Ile Thr Gln Gln Ser Asn Lys Leu Glu Thr
 130          135          140
Gly Lys Ser Arg Val Pro Pro Thr Val Thr Asn Ala Val Ser Trp Arg
 145          150          155          160
Ser Glu Gly Ile Lys Tyr Lys Lys Asn Glu Val Phe Ile Asp Val Ile
 165          170          175
Glu Ser Val Asn Leu Leu Val Asn Ala Asn Gly Ser Val Leu Leu Ser
 180          185          190
Glu Ile Val Gly Thr Ile Lys Met Arg Val Phe Leu Ser Gly Met Pro
 195          200          205
Glu Leu Arg Leu Gly Leu Asn Asp Lys Val Leu Phe Asp Asn Thr Gly
 210          215          220
Arg Gly Lys Ser Lys Ser Val Glu Leu Glu Asp Val Lys Phe His Gln
 225          230          235          240
Cys Val Arg Leu Ser Arg Phe Glu Asn Asp Arg Thr Ile Ser Phe Ile
 245          250          255
Pro Pro Asp Gly Glu Phe Glu Leu Met Ser Tyr Arg Leu Asn Thr His
 260          265          270
Val Lys Pro Leu Ile Trp Ile Glu Ser Val Ile Glu Lys Phe Ser His
 275          280          285
Ser Arg Ile Glu Tyr Met Val Lys Ala Lys Gly Gln Phe Lys Lys Gln
 290          295          300
Ser Val Ala Asn Gly Val Glu Ile Ser Val Pro Val Pro Ser Asp Ala
 305          310          315          320
Asp Ser Pro Arg Phe Lys Thr Ser Val Gly Ser Ala Lys Tyr Val Pro
 325          330          335
Glu Arg Asn Val Val Ile Trp Ser Ile Lys Ser Phe Pro Gly Gly Lys
 340          345          350
Glu Tyr Leu Met Arg Ala His Phe Gly Leu Pro Ser Val Glu Lys Glu
 355          360          365
Glu Val Glu Gly Arg Pro Pro Ile Gly Val Lys Phe Glu Ile Pro Tyr

```

ctgatggaga aggaggagga ggggatgctg tgccccatcc tggccacgg gggggtccgt
420
ttcatgtgga tcaaacacaa caacctgtat ctggttgcca catccaagaa gaacgcgtgc
480
gtgtcgctgg tcttttcttt cctctataag gtggtgcagg tgttttccga gtacttcaag
540
gagctggagg aggagagcat ccgggacaac tttgttatca tctacgagct gctggacgag
600
ctcatggact tcggcttccc ccagaccacc gacagcaaga tcctgcagga gtacatcact
660
cagcagagca acaagctgga gacgggcaag tcacgggtgc caccactgt caccaacgct
720
gtgtcctggc gctccgaggg tatcaagtat aagaagaacg aggtcttcat tgatgtcata
780
gagtctgtca acctgctggt caatgccaac ggcagcgctc ttctgagcga aatcgctcgg
840
accatcaaga tgcgagtctt cctctcgggc atgcccagagc tgcgcctggg cctcaacgac
900
aaggtcctct ttgacaacac gggccgcggc aaaagcaa at ccgtggagct ggaggatgtg
960
aagttccacc agtgtgtgcg gctatcacgc ttcgagaatg accgcaccat ctccttcac
1020
ccacccgacg gcgagtctga gctcatgtcc taccgtctca acacccacgt caagcctttg
1080
atatggatcg agtctgtcat tgagaagttc tcccacagcc gcacgagta catggtcaag
1140
gccaaagggc agtttaagaa acagtcagtg gccaaaggtg tggagatata tgtgcctgta
1200
cccagcgatg ccgactcccc cagattcaag accagtgtgg gcagcgccaa gtatgtgccg
1260
gagagaaaacg tcgtgatttg gagtattaag tctttcccgg ggggcaagga gtacttgatg
1320
cgagccact ttggcctccc cagtgtggaa aaggaagagg tggagggccg gccccccatc
1380
ggggtcaagt ttgagatccc ctacttcacc gtctctggga tccaggtccg atacatgaag
1440
atcattgaga aaagtgggta ccaggccctg ccctgggttc gctacatcac ccagagtggc
1500
gattaccaac ttcgtaccag ctagaaggga gaagagatgg gggcttgaac acggggcttc
1560
cttacagccc cggatgcaga ttttagaggg agggcagggtg cgggctgtgt gtgtctgtgt
1620
gagggcaggc cctggacttg gcagtttctt gctcccagca cccgcccctt cctcacctct
1680
tccttatcc ataggctggg agagaaactc tctctgcttc cctcgccctt ggagctttcc
1740
ccatccccct gattttatat gaagaaatag aagaggggct tgaagtcccc ctcgagagt
1800
ccttcttgca attacctgcc ttagcgggtg ttgcgggtcc ctccttcaca gccgctgagc
1860
ccagaggtcc cgctggcccc tcctctgaat tttaggatgt cattaaaaag atgaatctaa
1920
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1960

ggagatccgc cagttccagc ccagacagaa agtccatata ctccgtctct tccccggga
 1260
 ggctggcgat cgcctctctc tccatctctc cgggggaggg cgcgcgcacg gccacgccgc
 1320
 cgcggctccc cctccncggc ttccaactct ccttcgtcgc caaactgctg cttgcgggccg
 1380
 ggagatccgg ccgcgcgcgt ctctctctcc cccgctgcag cccgggtcag gtcagagggc
 1440
 agcgaacaag ttgcagccgg ctccgggctc tcaactgcggg ttggggagtt gctgcccag
 1500
 gctgccagca gcttggtcag gctatgcctc atgagggcca cgggcggccg cggtagcccc
 1560
 ggccgctaag agtggctcac gggccccaag gatcccaggc cccagggcgg gtagcccccg
 1620
 gcactggccg aaacgaaatg cagggaagg tccgagtcgc ctccgcctc acttggttag
 1680
 tcgcacccaa ggcgcgggga gggacgggag aacgaagcgg tgaggccctg cgatgactcg
 1740
 accgcgcc
 1748

<210> 4908

<211> 55

<212> PRT

<213> Homo sapiens

<400> 4908

Glu	Lys	Thr	Thr	Pro	Ser	Gly	Arg	Thr	Pro	Ser	Arg	Thr	Pro	Pro	Thr
1				5				10					15		
Pro	Tyr	Pro	Cys	Pro	His	Gly	Asp	Arg	Leu	Leu	Pro	Pro	Ser	Arg	Pro
		20					25					30			
Leu	Pro	Ala	Gly	Pro	Ala	Ser	Ala	Phe	Pro	Pro	Ala	Glu	Arg	Ser	Arg
		35					40					45			
Gly	His	Arg	Arg	Ala	Ser	Leu									
	50					55									

<210> 4909

<211> 1960

<212> DNA

<213> Homo sapiens

<400> 4909

nacgcgtcct gcggtcagga cagtgttcta agtgtgaagg gtccctgggc agaggctggg
 60
 aggggtggcca gagaccaggg agggcccctc catctggtgg gtttggcagg tgtgtccccg
 120
 cgcggctccc cgaaccggaa gtggaggatga gctgtgcgag gcggcgcccc gccttgctca
 180
 acgccagca gtccccaccg tcgtgcccgc cgccaccgcc ctgggccgt gccgaggcct
 240
 cctgcagcca tcatgtccgc cagcgcgcgtc tacgtgctgg acctgaaggg caaggtgctc
 300
 atctgccgga actaccgtgg cgacgtggac atgtcagagg tggagcactt catgcccatc
 360

	85		90		95										
Pro	Arg	Gly	Ser	Pro	Ala	Ser	Ala	Leu	Val	Leu	Ala	Phe	Gly	Gly	Asn
		100				105						110			
Pro	Leu	His	Cys	Asn	Cys	Glu	Leu	Val	Trp	Leu	Arg	Arg	Leu	Ala	Arg
		115				120						125			
Glu	Asp	Asp	Leu	Glu	Ala	Cys	Ala	Ser	Pro	Pro	Ala	Leu	Gly	Gly	Arg
	130					135					140				

<210> 4907

<211> 1748

<212> DNA

<213> Homo sapiens

<400> 4907

```

nntttttgct ggaaaatact ttttaattat gaacatgta aaaataaaaa acagcagaag
60
ccctgatatt acctcttttt cctcattttt tatactacct tttaaataaa agcaggaaat
120
gtggccagca gctgggccg tctcttctgc cccaacagct gtatccacag gttgtgaggc
180
gggaacgact gttctgtaac ccctacaacg gagcctggca ggaaggaaat cacctaaaaa
240
agaaactgtc agagagattt aatagtcaca tggtatcatt aggagttggt tactgtgtca
300
cattcatgct ttagctaaa cactttaaga ttcaatatta ctttttttct ctctctgaa
360
atgtgtccgg tgaagatgtc cactaaggt aagtttgaca tgggtgaagg gagttgaaag
420
gggtaaacgc ggataaagag cagattactt gaccctacat ttaagagaa gacgacgcct
480
tccgggcgca cgccgagcag aactccaccg acaccttacc cttgtccaca tggagacaga
540
ctctctccgc cgagtcgtcc tcttcagca ggtcctgctt ctgctttccc accggcagag
600
cgtagtcgtg gtcaccggcg ggcgagtctc tgaagagcga ggtggtcagc cgcagtccca
660
cgccgctcag ccggtcagc aagcgagcca gtccagtctc gttggctaag actgcccgta
720
ggtagcgact ctctctctgc agtgctgtg cgcgtttgcc cagctccga ttctcgccc
780
gcagctcctg gttctcggt gccagacccc ggactcgact ctccagcccc atcacgtact
840
ccttcttctt cagtcgatta aggcgggcag cgcccgccgc cgccttcgg ggactctttg
900
tcgcccctn ggttggtgtc gttaccgtg ccgccaccgc cgcctctcc tggggacttt
960
ctccgctct tttggcgct gccactgtca ctgctgtgc ctgctgtgc agcctccgat
1020
accgtttaac agcctttgca gnnccaggtc gagaagcgct gcatttcagc agccgcggcc
1080
tcacgtcat cgtccctct ccacaggccg ccgctatccg agcctccgcc agacgaggag
1140
agaggcccn nggcgagcta agcccggggt ccaggtgcc gtccgggtgc ctgggggtcca
1200

```

50 55 60
 Gln Leu Tyr Lys Glu Glu Gly Asn Gln Arg Tyr Arg Glu Gly Lys Tyr
 65 70 75 80
 Arg Asp Ala Val Ser Arg Tyr His Arg Ala Leu Leu Gln Leu Arg Gly
 85 90 95
 Leu Asp Pro Xaa Ser Ala Leu Ser Val Thr
 100 105

<210> 4905
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 4905
 cccggcagcc acgtggcgga tgggtgtccg cgacaggctc agatgcagca ggccctgtcat
 60
 gttggccagg tcgcggcggc gcacggaggc gatgaagttg tctgccagcc gcagctcggc
 120
 tgccccggcg tccagcgagg gtggcacgaa caggaggcct gcccctgggc acagcacgct
 180
 taggggcagc gactgtgtct ggcagcgcca gcggcgggga catgggctgg gtgtgccgag
 240
 acaactggagg acctcgacct ctctacaac aacctcgagc agctgccctg ggaggccctg
 300
 ggccgcctgg gcaacgtcaa cacgttgggc ctcgaccaca acctgctggc ttctgtgccc
 360
 gccggcgctt tttccgcct gcacaagctg gcccggtgg acatgacctc caaccgcctg
 420
 accacaatcc caccgcagcc actcttctcc cgctgcccc tgctcgccag gccccggggc
 480
 tcgcccgcct ctgccctggt gctggccttt ggcggaacc cctgcactg caactgcgag
 540
 ctggtgtggc tgcgtgcct ggcgcgggag gacgacctg aggcctgcgc gtccccacct
 600
 gctctgggcg gccgc
 615

<210> 4906
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 4906
 Gly Gln Arg Leu Cys Leu Ala Ala Ala Ala Gly Thr Trp Ala Gly
 1 5 10 15
 Cys Ala Glu Thr Leu Glu Asp Leu Asp Leu Ser Tyr Asn Asn Leu Glu
 20 25 30
 Gln Leu Pro Trp Glu Ala Leu Gly Arg Leu Gly Asn Val Asn Thr Leu
 35 40 45
 Gly Leu Asp His Asn Leu Leu Ala Ser Val Pro Ala Gly Ala Phe Ser
 50 55 60
 Arg Leu His Lys Leu Ala Arg Leu Asp Met Thr Ser Asn Arg Leu Thr
 65 70 75 80
 Thr Ile Pro Pro Asp Pro Leu Phe Ser Arg Leu Pro Leu Leu Ala Arg

<212> DNA

<213> Homo sapiens

<400> 4903

```

agccagtgtc ccaggcggtc tcacgccgca acaattcctg agtagggcct. tgcttgagtt
60
cttcggaaag tctcatccac cccacatcg cctcttttagg aagtcactta atgttgggct
120
tcattattcc cacatccctt tccttactac ttgcctgcac ttcttgagaa aaagactgca
180
gaaaggagag gtggggcctt cagtagaaac aagcaaaccg cagtcctgt ggggggactc
240
tccaggaaga aggttccgca agaaccgtgg gcgacagtta tggagaagcg tctgcaggag
300
gctcagctgt acaaggagga agggaaccag cgctaccggg aagggaagta ccgagatgct
360
gtgagtaggt accatcgagc tctgcttcag ctgcggggtc tggatccgna gtctgccctc
420
tccgttacct aatctcggac ctccagggccc nggccctcac gcctgnaaca agaaaacata
480
ttgcatacca cccagacaga ctgctataac aatctagctg cttgtctcct tcagatggag
540
cccgtgaact acgaacgagt gagagaatat agtcagaaaag tcctggaacg acagcctgat
600
aatgccaaagg ccttgatcg ggccggagtg gcctttttcc atctgcagga ctatgaccag
660
gcccgccact acctcctggc tgccgtgaat aggcagccta aagatgcaa cgtccggcgg
720
tacctccagc tgacacagtc agaactcagc agctaccata gaaaagagaa gcagctctac
780
ctgggcatgt ttggttaaca aagaagaaag atgctcctcc agttgaactt aggtggacca
840
ttaaacatgc atgaaggaga aatctgagcc tcagcaagag aaattaaccc tatacctctg
900
accaggtgg atttttgttt ctagtcttgc acaaacttca ctacttagac agtctgagtc
960
tttttctgtc tatccatctg tttatttcta tacctttcaa tacatgttat tgttcagat
1020
atttggttg agaaatataa tcagaaaaca taaaaaaaaa aaaa
1064

```

<210> 4904

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4904

```

Cys Trp Ala Ser Leu Phe Pro His Pro Phe Pro Tyr Tyr Leu Pro Ala
1           5           10           15
Leu Leu Glu Lys Lys Thr Ala Glu Arg Arg Gly Gly Ala Phe Ser Arg
20           25           30
Asn Lys Gln Thr Ala Val Pro Val Gly Gly Leu Ser Arg Lys Lys Val
35           40           45
Pro Gln Glu Pro Trp Ala Thr Val Met Glu Lys Arg Leu Gln Glu Ala

```

tggcctcctt gaactgtggg gtccaggaga ctccctgaac tgctagccct cccctttgtc
 1020
 tgtttatcta attctcaggt atgaggcttt agtcacttct ctttacagat atcaaagctc
 1080
 agctctttga aacatccagc aagacaggcc agagtgtggg tgagtgtgtg gctggagcct
 1140
 cacagcagga acatgcaggg gcaccagagg aagctgaata gggcacagag ggctgggtca
 1200
 ctgggagatc ccagggctac tggcattggg cctcgtctga tcatcatttt tcttgccaga
 1260
 cgagctcttc cagaaagtgg cagaggatta cgtcagtgtg gctgccttcc aggtgatgac
 1320
 agaggacaag ggcgtggatc tgggccagaa gccaaacccc tacttctaca gctgttgtca
 1380
 tcactgagtc agcactcacc tggcctgggg gaattaaagg aattccccgt aagcgtggac
 1440
 ccagctcctt tctgggcttg ggtagtcaaa tgtctgagct acgccaggtc ctcatgtcag
 1500
 cagagtggcg cctgcctgtc
 1520

<210> 4902

<211> 184

<212> PRT

<213> Homo sapiens

<400> 4902

Met	Ser	Gly	Gln	Arg	Val	Asp	Val	Lys	Val	Val	Met	Leu	Gly	Lys	Glu
1				5				10						15	
Tyr	Val	Gly	Lys	Thr	Ser	Leu	Val	Glu	Arg	Tyr	Val	His	Asp	Arg	Phe
			20					25					30		
Leu	Val	Gly	Pro	Tyr	Gln	Asn	Thr	Ile	Gly	Ala	Ala	Phe	Val	Ala	Lys
		35					40						45		
Val	Met	Ser	Val	Gly	Asp	Arg	Thr	Val	Thr	Leu	Gly	Ile	Trp	Asp	Thr
	50					55					60				
Ala	Gly	Ser	Glu	Arg	Tyr	Glu	Ala	Met	Ser	Arg	Ile	Tyr	Tyr	Arg	Gly
65					70					75				80	
Ala	Lys	Ala	Ala	Ile	Val	Cys	Tyr	Asp	Leu	Thr	Asp	Ser	Ser	Ser	Phe
				85					90					95	
Glu	Arg	Ala	Lys	Phe	Trp	Val	Lys	Glu	Leu	Arg	Ser	Leu	Glu	Glu	Gly
			100					105					110		
Cys	Gln	Ile	Tyr	Leu	Cys	Gly	Thr	Lys	Ser	Asp	Leu	Leu	Glu	Glu	Asp
		115					120						125		
Arg	Arg	Arg	Arg	Arg	Val	Asp	Phe	His	Asp	Val	Gln	Asp	Tyr	Ala	Asp
	130					135					140				
Ser	Ser	Cys	Ser	Ser	Ala	Leu	Trp	Gly	Val	Gly	Val	Cys	Gly	Cys	Leu
145					150					155				160	
Gly	Gly	Ser	Lys	Lys	Ile	Gly	Thr	Ala	Leu	Ala	Ala	Arg	Ala	Arg	Cys
			165					170						175	
Ser	Arg	Arg	Ser	Ser	Trp	Pro	Pro								
			180												

<210> 4903

<211> 1064

```
<210> 4901
<211> 1520
<212> DNA
<213> Homo sapiens
```

4076

agctcctatt ttaggaggtg gcctctggct gtgtctaatag gagttgacaa gaataaaagt
1680
agaaggagaa gaccaaggag gaggacgcca ggtgagagca ggtgggtggtc agg
1733

<210> 4898
<211> 92
<212> PRT
<213> Homo sapiens

<400> 4898
Xaa Phe Val Ala Arg Ala Gly Val Gln Trp Arg Asp Leu Ser Ser Leu
1 5 10 15
Gln Pro Leu Pro Leu Arg Phe Lys Gln Phe Ser Cys Phe Ser Leu Pro
20 25 30
Ser Ser Trp Asp Tyr Arg Arg Pro Pro Arg Cys Pro Ala Asn Phe Cys
35 40 45
Ile Phe Ser Lys Asp Arg Val Ser Pro Cys Trp Leu Gly Trp Ser Gln
50 55 60
Thr Pro Asp Xaa Thr Arg Leu Gly Leu Pro Lys Cys Trp Asp Tyr Arg
65 70 75 80
Arg Glu Pro Pro Arg Pro Gly Asp Leu Trp Asn Phe
85 90

<210> 4899
<211> 444
<212> DNA
<213> Homo sapiens

<400> 4899
ccggcccatc aaagactggc taaagcatca gccataaatg gggacaaaacg tggggccagc
60
agctttctggt cggggtctcg gcatacagcaa accgcagcag ctttggagaa gggtcctga
120
gtggcggctc tggaggcagc aacgggggtcc tttgggggtgg gtgggagttc tgctggattc
180
aggtggaggt gaacatctgc cgttcccaca gccctgcgtg ccccccaaa tgctgctggc
240
ccacagaatc agccagtgcc acggccccac cacagccagg cttggccctg tcagcggcca
300
gcatcccgag ggccagggtc cgagtgtcct caccaaggag gctcttggcg tcgctgtgcc
360
ggctcccatg ggcttctgc tgggtcgagg gtaggtctcc tctccccct ttgcctggc
420
attaaactga tggtcaggct ggga
444

<210> 4900
<211> 118
<212> PRT
<213> Homo sapiens

<400> 4900
Met Gly Thr Asn Val Gly Pro Ala Ala Ser Val Arg Gly Leu Gly Ile

nactttgttg cccgggctgg agtgcagtgg cgcgatctca gctcactgca gcctctgcct
60
ctcaggttca agcaattctc ctgcttcagc ctcccaagta gctgggatta caggcgccca
120
ccacgatgcc cagctaattt ttgtattttc agtaaagaca gggtttcacc atgttggtta
180
ggctgggtctc aaactcctga tncacccgc ctcgccctcc caaagtgtg ggattacagg
240
cgtgaaccac cgcgcccggg tgaccttgg aacttctgac cgactggctt caagttgagg
300
ttcccacaat tccctctgta ggttcaattt gctggagtgg ctcaaaaac taagggaat
360
acatttactg gtttattata aaggatatta taaaagatac agataaagag atgcataggg
420
tgaggtatga aggaaggga tggagcttcc tgtgccctcc ctgggcgcac cacccttcta
480
gaacctctgt atgttcagtt atctggaagc tctctgaatc cagtccccctt ggtttttatg
540
gaagcttcat gacagcagca ttccttctag caggatatgg ggtgggaccg tctctggaat
600
gagttttatg acccaccatc agaaaggtag ggaagattag agtctgtct tgggcaggta
660
aaaggaaggg caggaggta gagtgattgt ctctgaggc ctgacacacc caatgttgta
720
acaaaagagt gtaacaaggg ctgtgggagt tatgagccag gaactgtgga cgaaaatgaa
780
tgctgtgtt tgtatatatg tgtgtctgtg tatttatata tatatgtgtg tatatacaa
840
tacacacaca cacacgccac cacaaagcca aaaaagaaga agtgatcatt tttctaagtg
900
ctacgatgga tgccctggga gagcgagcca gagggggcat gtttatgggc tgagctgcac
960
ccccccacc ccaatttatg tgttgaacct ctaatccccg gtagctcgca atggccgta
1020
tgtgaatgga tatggagata agagaggtag ttacattaag atgaggccgt cagggggccc
1080
ctcatccaat ctaccagtg tctttataag agaaaatctg gacacacaaa gagacaccag
1140
ggacacctgc actcagaaga ccaaccaggg ccatctccaa gccaggaga gaggccttag
1200
aagaaaccaa ccctgcgaac accttggctt tggacttcca gcctccagga ctgtgagaaa
1260
ataaatgtct tttgtttaag ccactcagtc tctggtattt tcttatgaga gccagagcag
1320
accaacacag agggtcaggg gaagcgtcta tggggagggtg actcatgtac tgagtcttga
1380
gggagaggtt tccaggcaga tggagcagca tgctccaagg ccttgtgaag gaaaagagct
1440
cagtgtgtc cgggaaccag gagaagatga gggaggccag ggcctaagga gggcagggtta
1500
ggagaggaag tgggaagaca tgcaggggac atgtgcacag ggctgggaag gaggctgagt
1560
tttcttctca gtgccatgtg aagccactga agagttttaa tgagaaaagg gacataagtc
1620

agaaaactgc ggcagagcaa ttcaaatttc acatgccaga tttatgaaga aatggacttg
 420
 gaaaggaaat tctaacagag aagagcttaa ttccggagaa atttaggaag atgtcttggt
 480
 aacccttgat gtctagagat tgggggctgg tgaagggggt ttggcttcaa tgactggata
 540
 atgatatctt tcatgagaga gattataaga agaagggcag ataatatatg aataaagttc
 600
 agccaaaagg atcaaagtag aataaaaacga tttaaataata tgtacacacg catgcacaca
 660
 cacacttagt cttgtaattt caggccagaa attctcaaca ctattttgca tctgttttct
 720
 ttttctaagt catgataata tagatgttct ggtctatcat aaaagaatgt ttatgtacat
 780
 ttcagtcatt cggtatgtgg ctttgtaaata taaagtatag gcaaaacatt tgtgtttatac
 840
 atgatataata atttcatttt gtaaagtgtg attgcacatg tggtcacatt attgttgaga
 900
 ctgcttttat gtgacctgta gtctcccaca gaacctaaag taataagctg gcttttctgt
 960
 gatagccacg tttgcgtatt tctttcccta tttcccttgc ctgctaattg tgaacagcat
 1020
 gaacttgctt tctgatgctg ttttagactg tccctgttgt atctcaataa tatctttggt
 1080
 ttccttc
 1087

<210> 4896

<211> 109

<212> PRT

<213> Homo sapiens

<400> 4896

Met	Glu	Ala	Glu	Val	Asp	Lys	Leu	Glu	Leu	Met	Phe	Gln	Lys	Ala	Glu
1			5				10				15				
Ser	Asp	Leu	Asp	Tyr	Ile	Gln	Tyr	Arg	Leu	Glu	Tyr	Glu	Ile	Lys	Thr
		20					25				30				
Asn	His	Pro	Asp	Ser	Ala	Ser	Glu	Lys	Asn	Pro	Val	Thr	Leu	Leu	Lys
		35					40				45				
Glu	Leu	Ser	Val	Ile	Lys	Ser	Arg	Tyr	Gln	Thr	Leu	Tyr	Ala	Arg	Phe
		50					55				60				
Lys	Pro	Val	Ala	Val	Glu	Gln	Lys	Glu	Ser	Lys	Ser	Arg	Ile	Cys	Ala
65					70				75					80	
Thr	Val	Lys	Lys	Thr	Met	Asn	Met	Ile	Gln	Lys	Leu	Gln	Lys	Gln	Thr
				85					90					95	
Asp	Leu	Glu	Val	Met	Leu	Ser	Val	Asp	Ser	Cys	His	His			
			100						105						

<210> 4897

<211> 1733

<212> DNA

<213> Homo sapiens

<400> 4897

115	120	125
Ser Gln Pro Glu Arg Glu Val Asp Pro Ser Trp Gly Arg Gly Arg Glu		
130	135	140
Pro Arg Leu Gly Lys Leu Arg Phe Gln Asn Asp His Leu Ser Val Leu		
145	150	155
Lys Gln Val Lys Lys Leu Glu Gln Ala Leu Lys Asp Gly Ser Ala Gly		
165	170	175
Leu Asp Pro Gln Leu Pro Gly Thr Cys Tyr Ser Pro His Cys Pro Pro		
180	185	190
Asp Lys Ala Glu Ala Gly Ser Thr Leu Pro Glu Asn Leu Gly Gly Gly		
195	200	205
Ser Gly Ser Glu Val Ser Gln Arg Val His Pro Ser Asp Leu Glu Gly		
210	215	220
Arg Glu Pro Thr Pro Glu Leu Val Glu Asp Arg Lys Gly Ser Cys Arg		
225	230	235
Arg Pro Trp Asp Arg Ser Leu Glu Asn Val Tyr Arg Gly Ser Glu Gly		
245	250	255
Ser Pro Thr Lys Pro Phe Ile Asn Pro Leu Pro Lys Pro Arg Arg Thr		
260	265	270
Phe Lys His Ala Gly Glu Gly Asp Lys Asp Gly Lys Pro Gly Ile Gly		
275	280	285
Phe Arg Lys Glu Lys Arg Asn Leu Pro Pro Leu Pro Ser Leu Pro Pro		
290	295	300
Pro Pro Leu Pro Ser Ser Pro Pro Pro Ser Ser Val Asn Arg Arg Leu		
305	310	315
Trp Thr Gly Arg Gln Lys Ser Ser Ala Asp His Arg Lys Ser Tyr Glu		
325	330	335
Phe Glu Asp Leu Leu Gln Ser Ser Ser Glu Ser Ser Arg Val Asp Trp		
340	345	350
Tyr Ala Gln Thr Lys Leu Gly Leu Thr Arg Thr Leu Ser Glu Glu Asn		
355	360	365
Val Tyr Glu Asp Ile Leu Asp Pro Pro Met Lys Glu Asn Pro Tyr Glu		
370	375	380
Asp Ile Glu Leu His Gly Arg Cys Leu Gly Lys Lys Xaa Val Ser		
385	390	395

<210> 4895

<211> 1087

<212> DNA

<213> Homo sapiens

<400> 4895

gcggaatgtc aactattcaa catggaggcg gaggtcgata agctggaact gatgttccag
60

aaagctgagt ctgatctgga ttacattcaa tacaggctgg aatatgaaat caagactaat
120

catcctgatt cagcaagtga gaaaaatcca gttacactct taaaggaatt gtcagtgata
180

aagtctcgat atcaaaacttt gtatgccgcg tttaaaccag ttgctgttga gcagaaagag
240

agtaagagcc gcatttgtgc tactgtgaaa aagactatga atatgataca aaaactacag
300

aagcaaacag acctggaggt aatgctttca gttgacagct gtcaccactg actaaagaag
360

gtgacccctg ccctcagctc tcaccagcga ccctcacaga aacacaaaag ggaggggagc
 4320
 cgacctcaac aatggcccag agggggccata ctgcctggca ggggttctca acctttaggg
 4380
 agcgggagca aggggccttc cgaggataaa tagaaatgag gaaaatgagg ggaggtgacc
 4440
 tctcatcctt cctcttagct ggagttatgg accccctcgc ccctccaagt tctaccagg
 4500
 ctttggtgtg tccattactt tttcagaggt gaagatccac agtttacatc aaattctcaa
 4560
 agatgctccc agaatggtag aaaccaggct gtgcataaaa attaacctgc ctggctgggc
 4620
 gcggtgactc acacctgtaa tctcagcact ttgagaggcc aaggcaggty ggtggatcac
 4680
 ttgaggtcag gagttcgagg ccagcctggc caacatggca aaactccgic tgtactaaaa
 4740
 atacaagaaa aacttagcca gccatggtgg tgcgtgcctg ttatcccaac tacctggaag
 4800
 gctgaggcag aagaatcgct tgaactgggg aggagaaggt tgcagtgaic cgagatcatg
 4860
 ccactgcact ccagcctgga caacagagca agactccttc tcaaaaaaac tctggctggg
 4920
 tgtgtgtggg tggggactag ggggatgcct gaatgagaat ccctgaatcc ttgagtgtgg
 4980
 gggttcagga atatgtatct aacaagctcc ttggattagt caagtttgtg tgggggctca
 5040
 ggaatatatg tatctagcaa gctcctcaga ctagtcaact ttcttaatag tctgcatatt
 5100
 tgtatatatg ccagaaaggg acactttttg gaatatactt tctttttttt aacttatttc
 5160
 gcattatatt gtttacttaa taactccaag caaataaatg tacatcttta tc
 5212

<210> 4894

<211> 399

<212> PRT

<213> Homo sapiens

<400> 4894

Met	Asp	Met	Phe	Ser	Leu	Asp	Met	Ile	Ile	Ser	Asp	Pro	Ala	Ala	Glu
1				5				10					15		
Ala	Ser	Arg	Ala	Gly	Lys	Lys	Gln	Leu	Arg	Gly	Val	Gln	Asn	Pro	Cys
			20				25					30			
Pro	Ser	Ala	Arg	Ala	Arg	Pro	Arg	His	Lys	Ser	Leu	Asn	Ile	Lys	Asp
		35				40					45				
Lys	Ile	Ser	Glu	Trp	Glu	Gly	Lys	Lys	Glu	Val	Pro	Thr	Pro	Ala	Pro
	50				55				60						
Ser	Arg	Arg	Ala	Asp	Gly	Gln	Glu	Asp	Tyr	Leu	Pro	Ser	Ser	Thr	Val
65			70				75			80					
Glu	Arg	Arg	Ser	Ser	Asp	Gly	Val	Arg	Thr	Gln	Val	Thr	Glu	Ala	Lys
			85				90			95					
Asn	Gly	Met	Arg	Pro	Gly	Thr	Glu	Ser	Thr	Glu	Lys	Glu	Arg	Asn	Lys
		100				105				110					
Gly	Ala	Val	Asn	Val	Gly	Gly	Gln	Asp	Pro	Glu	Pro	Gly	Gln	Asp	Leu

gtggccctgg aacacattct ggaacagagg aacgagctgg cttgtgagca ggacgaaggg
2700
cccctagacg gcaggcacgg tccagagtcc agccccttga acgagggtgg gtctgaagcc
2760
tttgtccgct tcttcgtgga gattgtggga cactactctt tggtcctgac gtcgggagag
2820
cgtgaggaga gaaccctgca gcgggaggcc ttccgcaaag ctgtctcctc caagagcctc
2880
cgccacttcc tggagggtctt catggagact cagatgtttc ggggcttcat ccaggagcgg
2940
gagctgcgcc ggcaggatgc caaaggtctg tttagaggtcc gagcccaaga gtatctggaa
3000
acactcccca gtggagagca cagcgggtgc aataagttcc tgaagggact aggcaataaa
3060
atgaaatttc tccacaagaa ataactctca gcctcaaggg aaaacttcct cctagtgcag
3120
ccctatgctt taaaaacagt tcctggtggc ctttctgaaa ggctgggtcc caggttgtca
3180
cgggtgcggaa ctggaggccg cgggtggcttc tggccgaggc tgggctcttc cctggatgag
3240
gacctgggag ccgcctggga ggacagcccc agaaagggag cccgagacca ggcgtgtcgc
3300
cgacatgcaa atgggttgtt ttggtggttg ggtttttttt tttatcttag atattaaaag
3360
taagaaaaat gtgtgggttt tctgtttatt atgccaaggc caagaggagc ctgtcctgcc
3420
ctacacgttc ccctcgttcg tcccatccgg ccgctcagca atggagctaa gaggagtggg
3480
gatgggcaac agaaatgagg tgctcctcgg agcgggactg acgacacatg aggactgtga
3540
ggggaggagg cggagccggt gcctcgggtt caggaggatga ggctccttag tgaaaggctg
3600
ggcccttgcc ctagagtgga ggctagggag gaacgggagc tgtagacgga tgtggcttcc
3660
cagacacgct gctcttccag aagggacagt gatgccacct ggtggccgag gccatggacg
3720
tctctcttcc caaatggacc tgactcttct tgactgcctt gttctcttag aagaagccat
3780
ggaactgtcc actgcctgag tagtccctgg cttttagagg cacacacaca aaaagaggtc
3840
agtaaaactgt tctaggggtc ttcaagttta cgacactgct cacggcccac cttccaacac
3900
atagccacaa ctttgacccc gttcccatct cattccaggg gccagagca gcattaatgc
3960
aatagtggat gtgcaactgcc tgtacacggt ggggggaggg gggacctttt gcggctgatg
4020
gtaacaagat ggaggggtgag aacgctgggg cggcgtcatg agccgtgtgc agccagagag
4080
gcagcttgag ttttctggac cagaagcagg gaggggtgtg agaaggccaa aaacctcagg
4140
gcgacctaa agctgtcctg cagcggggac agtggggaca gcagggacag cggggaggca
4200
ggaaaagccc cgaacacagc tgaggcaggt tctcagagca agcctcaggg ccactaccag
4260

agacagaaat ccagtgcaga ccacagaaag tcctatgagt ttgaagattt actgcagtct
1080
tcctctgaga gcagcagggt ggactggtac ggcagacta agctggggct gacacgcact
1140
ttatcggagg agaacgtcta tgaagacatt ctagatccgc caatgaagga gaacccttat
1200
gaggacatcg agttacatgg tcgctgcctg ggaaagaagn ntgtgtcttg aattttcctg
1260
cttctccac ctncttccat ccctgacaca ctcaccaagc agtcattgtc caaacctgct
1320
tttttccgac aaaattcaga gaggaggaac ttcaagctgc tggacactag gaagctgagt
1380
cgggatggaa ctgggtcccc ttccaaaatc agccctccct ccactcccag cagccctgat
1440
gacattttct ttaaccttgg agaccacag aacggcagga agaagagaaa gatacccaag
1500
ctggtgttgc gaatcaacgc cttttatgag gtccggagag gaaagaaacg ggtgaagagg
1560
ctgtcccagt caatggagag caactcagga aaagtgcagc atgagaacag tgagtctgac
1620
agtgcacagc aggagaagct gaaagctcac agccagcgcc tggtaacgt gaagtcccgg
1680
ctgaagcagg cgctcggtc cccatcactt gcccggaac tcatcgagta ccaggagagg
1740
cagctcttcg agtactttgt ggttgtgtct ttgcacaaga agcaggcccg ggctgcctac
1800
gtgccagaac tcaccaaca gtccctctg aagttggaaa ggtctttcaa gttcatgaga
1860
gaagctgagg accaactgaa ggccattccc cagttctgtt ttcccgatgc caaggattgg
1920
gttcctgtcc agcagttcac cagtgaaca ttctcgttt tcttaactgg agaagatggg
1980
agcagaaggt tcggttactg ccgaagactg ctgcctggag gcaaaggga ggccttccct
2040
gaagtttact gcattgtgag ccgcctggga tgcttcagcc tcttttcaag gatcttgat
2100
gaggtggaaa aaagacgagg catctctcct gccctggtc agccactcat gagaagtgtc
2160
atggaagccc ctttccagc cctgggcaaa accatccttg tcaagaactt cctgccagggt
2220
tcaggaactg aggtgatcga actgtgccgc ccgctggact cccggctcga gcacgtggac
2280
tttgagtctc tcttctcctc cctcagcgtc cgccacctgg tctgtgtgtt tgcctccctg
2340
cttctggaga ggagggtcat cttcattgca gacaagctca gcacctgtc caagtgtgc
2400
cacgcgatgg tggcgctgat ctacccttc gccctggcagc acacctacat cccggtgtg
2460
ccaccgcga tggctgacat cgtgtgtctg ccgacgccct tctcatcgg gctgtctcc
2520
agctcgctgc cactgtctag ggagctgccg ctggaagagg tccttggtgtg tgacctcgtc
2580
aacagccggt tcctcagaca gatggacgat gaggactcca tcctgccccg gaagcttcag
2640

115	120	125
Tyr Ala Ala Asp Pro Gln Asp Lys His Trp Leu Ala Glu Gln His His		
130	135	140
Met Arg Ala Thr Gly Gly Lys Met Ala Tyr Leu Leu Ile Glu Glu Asp		
145	150	155
Ile Arg Asp Leu Ala Ala Ser Asp Asp Tyr Arg Gly Cys Leu Asp Leu		
165	170	175
Lys Leu Glu Glu Leu Lys Ser Phe Val Leu Pro Ser Trp Met Val Glu		
180	185	190
Lys Met Arg Lys Tyr Met Glu Thr Leu Arg Thr Glu Asn Glu His Arg		
195	200	205
Ala Val Glu Ala Pro Pro Gln Thr		
210	215	

<210> 4893

<211> 5212

<212> DNA

<213> Homo sapiens

<400> 4893

```

nnctaaagga gtccctgga aggcctccac aacctcacgc tagagtcaag aatggatatg
60
ttcagcttgg atatgatcat cagtgaacca gctgcagaag ccagcagggc tgggaagaag
120
cagctcagag gtgttcagaa cccttgccca tctgccagag ccagaccccg gcacaagtcc
180
ctcaacataa aggacaagat atcagaatgg gaagggaaga aagaggtgcc cactcctgca
240
cccagcagga gagcagacgg acaggaggat tatctgccgt cctctacggt ggagaggagg
300
agtagtgatg gggtgagaac tcaggtcaca gaggctaaga atggaatgag gccaggaaca
360
gagagcacag agaaggagag gaataaagga gcagtgaacg tcgggggaca ggacccagag
420
ccggggcaag acctaagcca gccagaacgg gaagtggatc ctagctgggg ccgaggccga
480
gagccaagac ttggcaagct gcgctttcag aacgatcacc tctcctgct gaagcaggtc
540
aagaaactcg agcagggttt gaaggatggg tcggcagggc tggatcccca gttaccaggg
600
acttgttact cccacactg ccctcctgac aaggcagagg cagggtccac ccttctgag
660
aacctgggag gcgggagtgg ctcagaagtc agccagaggg tccaccctc ggacctggaa
720
ggcagggagc ccaccctga gcttgaggag gacaggaaag gttcatgcag aaggccctgg
780
gaccggagcc ttgagaacgt gtataggggc tcggagggtt ccccccacaa gcccttcac
840
aaccctctgc caaaaccccg gagaacgttc aaacatgccg gagaagggga caaagatggg
900
aagcctggca tcggcttcag gaaagagaaa agaaatctgc ctctctgcc ctctctacct
960
cccccgctc tgccctctc tccccacct tctctgtga acagaagact gtggaccggg
1020

```

aagaggaaag gacggcctcc tggacacatc ctgtcaagcg accgggcagc cgccggcatg
 1140
 gtatggaaac caaaatcctg tgaaccaatt cgccgggaag gcccgaagtg ggaccagct
 1200
 cgcctgaatg aatctaccac ctttgtgttg ggatctcgag ccaacaaagc cctggggatg
 1260
 gggggcacca gaggaagaat ctacatcaag caccacacacc tctttaagta tgcagctgac
 1320
 ccccaggata agcactggct ggctgagcag catcacatgc gggcaacagg gggcaagatg
 1380
 gcctacctcc tcatcgagga ggacatccgg gaccttgccg ccagtgatga ttacagagga
 1440
 tgcttgatc tgaagctaga ggaattgaaa tcctttgtcc taccctcctg gatggtggag
 1500
 aagatgagaa agtatatgga gacactacgg acagagaatg agcatcgtgc tgttgaagca
 1560
 cctccacaga cctgaggccg ggtcccctgg ccacacttgg cagccctcct ccaaagccct
 1620
 cttcctcacg tggtgaggc caccgctggg actgctccta gatggatctc agcggcatta
 1680
 agctgtgcct gacgagttt gtagtgactc actgcacagc acccccagac tagcatgtgg
 1740
 ttctatatatt gtaaagttat tgggataaga aacaattaa cagttttagt taaacacaga
 1800
 tggatgaacct gctgtgcct ctacctgtg ggaattgaca gaacatcaag ggctctagaa
 1860
 gtgggtgtag gaaaaagga cgagataacc ctcaccata acagtataga gccaggcttg
 1920
 ataagaccaa cctgggagca ccatgtaccc tgcccgtctt ccctttgccc attttagt
 1980
 tccttaccca gctaatgt
 1998

<210> 4892

<211> 216

<212> PRT

<213> Homo sapiens

<400> 4892

Ser	Arg	Lys	Pro	Val	Gly	Ala	Ala	Trp	Ser	Arg	Leu	Xaa	Leu	Leu	Phe
1				5				10					15		
Ser	Asp	Gly	Glu	Lys	Val	Ile	Pro	Arg	Leu	Thr	His	Glu	Leu	Pro	Gly
		20					25					30			
Ile	Lys	Arg	Gly	Arg	Gln	Ala	Glu	Glu	Glu	Cys	Ala	His	Arg	Gly	Ser
		35				40					45				
Pro	Leu	Pro	Lys	Lys	Arg	Lys	Gly	Arg	Pro	Pro	Gly	His	Ile	Leu	Ser
	50				55				60						
Ser	Asp	Arg	Ala	Ala	Ala	Gly	Met	Val	Trp	Lys	Pro	Lys	Ser	Cys	Glu
65			70				75						80		
Pro	Ile	Arg	Arg	Glu	Gly	Pro	Lys	Trp	Asp	Pro	Ala	Arg	Leu	Asn	Glu
			85				90						95		
Ser	Thr	Thr	Phe	Val	Leu	Gly	Ser	Arg	Ala	Asn	Lys	Ala	Leu	Gly	Met
			100				105						110		
Gly	Gly	Thr	Arg	Gly	Arg	Ile	Tyr	Ile	Lys	His	Pro	His	Leu	Phe	Lys

1	5	10	15
His Thr Pro Pro Asn Gly Ile Arg Asp Trp Ala Lys Gln Arg Met Trp			
	20	25	30
Arg Thr Gly Gln Pro Gln Pro Ala Pro Thr Arg Val Asn Ile Ser Arg			
	35	40	45
Pro Ser Pro Thr Leu Phe Pro Asp Ser Gln Gln Thr Asp Val Gly Ser			
	50	55	60
Arg Thr Asp Pro Phe Thr His Thr His Thr His Ser His Ser Phe Ala			
65	70	75	80
His Ile His Ser Cys Thr His Ala Met Tyr			
	85	90	

<210> 4891

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 4891

```

ngggcaggac tgggtgggaca cagaagcggc cacagcctga cttgcaacat tttctccag
60
cttgacaatt ctcatccatc acacagccaa caatgcacag gccaccaga acttttggag
120
aatcaccgcc ccgcccctccc tcaatgtctc cgaggcaggt gcggccacag ccggtgctgc
180
agcatttatg cccctgggga caggatgcat ccccatcaca cagctcctca cacggaaggg
240
ggtcagcggg acattcacca ccaaactcct taggaatgtc tcggcagatc cgaccacagc
300
ctgtggtgca gcattctgt tccagccggac acaattcacc gccctggcac agctctttgc
360
atgggttctt atcgggaggg cattctccct cttttgaagg cctctaagtg taactgtcct
420
gggcgaggcg cggcggttcg gttcccatgg taaccccgca gctccagcgt cgcgcttcg
480
ggcggacgag cagcgcgctc cagtgcgctc acggcgccac tttccggccg gtgacagagt
540
ccagcggagt tgtgggggcc gggggcgcca tgggagccac tggcgacgcc gagcagccgc
600
ggggacctag cggggccgag agggggcggt tggagctggg ggatgcgggc gcagcggggc
660
agctggttct tacggtgagg gcgccccga acccttgga cataatgata aagcaccggc
720
aggtgcagcg gaggggccgc cgctcacaga tgacaacaag tttcacagat cctgccatct
780
ccatggatct cctccgagct gtctgcagc ccagcatcaa cgaggagatc cagactgtct
840
tcaacaagta cataaagttc ttccagaagg cagcactgaa cgtgcgagac aatgttgggg
900
aggaggtgga cgcagagcag ctgatccagg aagcctgtcg gagctgcctg gagcaggcta
960
naactgctct tttcagatgg agaaaaagta atacccagat tgacccatga gcttccagga
1020
ataaagcgtg gccgtcaggc agaagaagaa tgtgcccatc gaggaagccc ccttcctaaa
1080

```

```

      290              295              300
Tyr Leu Thr Asp Leu Gln Val Ser Leu Ile Arg Asp Ile Arg Arg Arg
305              310              315              320
Gly Lys Asn Lys Val Ala Ala Gln Asn Cys Arg Lys Arg Lys Leu Asp
      325              330              335
Ile Ile Leu Asn Leu Glu Asp Asp Val Cys Asn Leu Gln Ala Lys Lys
      340              345              350
Glu Thr Leu Lys Arg Glu Gln Ala Gln Cys Asn Lys Ala Ile Asn Ile
      355              360              365
Met Lys Gln Lys Leu His Asp Leu Tyr His Asp Ile Phe Ser Arg Leu
      370              375              380
Arg Asp Asp Gln Gly Arg Pro Val Asn Pro Asn His Tyr Ala Leu Gln
385              390              395              400
Cys Thr His Asp Gly Ser Ile Leu Ile Val Pro Lys Glu Leu Val Ala
      405              410              415
Ser Gly His Lys Lys Glu Thr Gln Lys Gly Lys Arg Lys
      420              425

```

<210> 4889

<211> 619

<212> DNA

<213> Homo sapiens

<400> 4889

```

nntgtttttc actttattat acaaaaaagg gaaaacaaaa cttccacagt tggctttaag
60
cataggcaga cacctctaag ccactccctc ccacctccca tgatacaaat tcaagttgtg
120
gtggttggtg aatcctacaa aacactcctt aaatattaga aaagaagtta ggagctccca
180
gcacatttct tgaagcccag gttctgagcc tggggtggcc aggcttggcc tctcagatga
240
acaggggaga ctttttccat caaatacaag ctttaagctt cacaccatct tgcttgctt
300
tcgccttcc tgctggacaa tggagaccag cagctcggat gcatgtgact ctggcagagg
360
gagcctggtc tgggaagcat ccgagaatgg cttcagcaca ctccccctaa tggaatcaga
420
gactgggcaa aacagaggat gtggagaacg gggcagcctc agcctgctcc caccagggtc
480
aacatctccc ggccctcacc gacccttttt ccagattcac aacaaactga tgtgggctct
540
aggacagacc cttttacaca cacacacaca cactcacact cttttgcaca catccacagc
600
tgcacccatg ctatgtaca
619

```

<210> 4890

<211> 90

<212> PRT

<213> Homo sapiens

<400> 4890

```

Leu Trp Gln Arg Glu Pro Gly Leu Gly Ser Ile Arg Glu Trp Leu Gln

```

ccaaagaata ggtaacatg aaaacccagt aagactttcc atcttggcag ccaccccttt
 2040
 taagagtaag ttggttactt caaaaagagc aaacactggg gatcaaatta ttttaagagg
 2100
 tatttcagtt ttaaatgcaa aatagcctta ttttcattta gtttgtagc actatagtga
 2160
 gcttttcaaa cactatttta atctttatat ttaacttata aattttgctt tctatggaaa
 2220
 taaattttgt atttgattta aaaattaact tttccctttt aaaaaaaaaa a
 2271

<210> 4888

<211> 429

<212> PRT

<213> Homo sapiens

<400> 4888

Gly	Tyr	Ser	Cys	Leu	Lys	Cys	Phe	Ser	Phe	Val	Phe	Gln	Gly	Ile	Ser
1				5					10					15	
Leu	Gly	Asp	Ile	Pro	Leu	Pro	Gly	Ser	Ile	Ser	Asp	Gly	Met	Asn	Ser
			20					25					30		
Ser	Ala	His	Tyr	His	Val	Asn	Phe	Ser	Gln	Ala	Ile	Ser	Gln	Asp	Val
		35					40					45			
Asn	Leu	His	Glu	Ala	Ile	Leu	Leu	Cys	Pro	Asn	Asn	Thr	Phe	Arg	Arg
	50					55				60					
Asp	Pro	Thr	Ala	Arg	Thr	Ser	Gln	Ser	Gln	Glu	Pro	Phe	Leu	Gln	Leu
65					70					75				80	
Asn	Ser	His	Thr	Thr	Asn	Pro	Glu	Gln	Thr	Leu	Pro	Gly	Thr	Asn	Leu
			85						90					95	
Thr	Gly	Phe	Leu	Ser	Pro	Val	Asp	Asn	His	Met	Arg	Asn	Leu	Thr	Ser
			100					105					110		
Gln	Asp	Leu	Leu	Tyr	Asp	Leu	Asp	Ile	Asn	Ile	Phe	Asp	Glu	Ile	Asn
	115					120						125			
Leu	Met	Ser	Leu	Ala	Thr	Glu	Asp	Asn	Phe	Asp	Pro	Ile	Asp	Val	Ser
	130					135					140				
Gln	Leu	Phe	Asp	Glu	Pro	Asp	Ser	Asp	Ser	Gly	Leu	Ser	Leu	Asp	Ser
145					150					155				160	
Ser	His	Asn	Asn	Thr	Ser	Val	Ile	Lys	Ser	Asn	Ser	Ser	His	Ser	Val
			165						170					175	
Cys	Asp	Glu	Gly	Ala	Ile	Gly	Tyr	Cys	Thr	Asp	His	Glu	Ser	Ser	Ser
			180					185					190		
His	His	Asp	Leu	Glu	Gly	Ala	Val	Gly	Gly	Tyr	Tyr	Pro	Glu	Pro	Ser
	195					200						205			
Lys	Leu	Cys	His	Leu	Asp	Gln	Ser	Asp	Ser	Asp	Phe	His	Gly	Asp	Leu
	210					215					220				
Thr	Phe	Gln	His	Val	Phe	His	Asn	His	Thr	Tyr	His	Leu	Gln	Pro	Thr
225					230					235				240	
Ala	Pro	Glu	Ser	Thr	Ser	Asp	Xaa	Phe	Pro	Xaa	Ala	Gly	Lys	Ser	Gln
				245					250					255	
Lys	Ile	Arg	Ser	Arg	Tyr	Leu	Glu	Asp	Pro	Asp	Arg	Thr	Leu	Ser	Arg
			260					265					270		
Asp	Asp	Gln	Arg	Ala	Lys	Ala	Leu	His	Ile	Pro	Phe	Ser	Val	Asp	Glu
	275					280							285		
Ile	Val	Gly	Met	Pro	Val	Asp	Ser	Phe	Asn	Ser	Met	Leu	Ser	Arg	Tyr

cagcatctat ctctattaaa tgtagaggaa ttgacaaaag aggggaaaga aagttgttag
420
gtaatagaac tgcttcagaa atagggtat tcatgtttga agtgtttctc cttegttttt
480
cagggcatct cattgggaga tttcctctt ccaggcagta tcagtgatgg catgaattct
540
tcagcacatt atcatgtaaa cttcagccag gctataagtc aggatgtgaa tcttcatgag
600
gccatcttgc tttgtcccaa caatacattt agaagagatc caacagcaag gacttcacag
660
tcacaagaac catttctgca gttaaattct cataccacca atcctgagca aacccttctc
720
ggaactaatt tgacaggatt tctttcaccg gttgacaatc atatgaggaa tctaacaagc
780
caagacctac tgtatgacct tgacataaat atatttgatg agataaaactt aatgtcattg
840
gccacagaag acaactttga tccaatcgat gtttctcagc tttttgatga accagattct
900
gattctggcc tttctttaga ttcaagtcac aataatacct ctgtcatcaa gtctaattcc
960
tctcactctg tgtgtgatga aggtgctata gggtattgca ctgaccatga atctagtctc
1020
catcatgact tagaagggtgc tgtaggtggc tactaccagc aaccagtaa gctttgtcac
1080
ttggatcaaa gtgattctga tttccatgga gatcttacat ttcaacacgt atttcataac
1140
cacacttacc acttacagcc aactgcacca gaatctactt ctgacncttt tccgnntgct
1200
gggaagtcac agaagataag gagtagatac cttgaagacc cagatagaac cttgaagcgt
1260
gatgaccagc gtgctaaagc tttgcatatc cctttttctg tagatgaaat tgcggcatg
1320
cctgttgatt ctttcaatag catgttaagt agatattatc tgacagacct acaagtctca
1380
cttatccgtg acatcagacg aagagggaaa aataaagttg ctgctgagaa ctgctgtaa
1440
cgcaaattgg acataatttt gaatttagaa gatgatgtat gtaacttgca agcaaagaag
1500
gaaactctta agagagagca agcacaatgt acaaaagcta ttaacataat gaaacagaaa
1560
ctgcatgacc tttatcatga tatttttagt agattaagag atgaccaagg taggccagtc
1620
aatcccaacc actatgctct ccagtgtacc catgatggaa gtatcttgat agtaccctaa
1680
gaactggtgg cctcaggcca caaaaaggaa acccaaaagg gaaagagaaa gtgagaagaa
1740
actgaagatg gactctatta tgtgaagtag taatgttcag aaactgatta tttggatcag
1800
aaaccattga aactgcttca agaattgtat ctttaagtac tgctacttga ataactcagt
1860
taacgtgttt ttgaagctta catggacaaa tgtttaggac ttcaagatca cacttgtggg
1920
caatctgggg gagccacaac ttttcatgaa gtgcattgta tacaaaattc atagtattgt
1980

cttagaagg aaaatatggc tgctctttgc cggacagcag agtcccagaa ccccatgcag
 60
 gtgtttcagg gctttatgtc attcaaggat gtggctgtga acttcactag gnaagaatgg
 120
 agagaactgg accttgctca gagagtcttg tacagggatg taatgctgga gaactatagg
 180
 aacctggtct ccttggtagg atttccattt tccaaacctg gtatcatctc ctagttggaa
 240
 gaagtggtaa gcccacgaac acaaatgcag gagggagagg tgccaagaag cagcggatca
 300
 cgagaaagac agggctggag accagtttgc tgatagtgc ccccaaccag aaaagttcat
 360
 tgggctgcac cctccagtag aactggacct gaggcagcta ggaataggat gcatgtttct
 420
 gaccctggcc aggatcagaa agaaggaaac ctctcctgag ggtcttcagc agtggaagag
 480
 ggagtcag
 489

<210> 4886

<211> 77

<212> PRT

<213> Homo sapiens

<400> 4886

Leu	Lys	Lys	Glu	Asn	Met	Ala	Ala	Leu	Cys	Arg	Thr	Ala	Glu	Ser	Gln
1				5					10				15		
Asn	Pro	Met	Gln	Val	Phe	Gln	Gly	Phe	Met	Ser	Phe	Lys	Asp	Val	Ala
			20				25						30		
Val	Asn	Phe	Thr	Arg	Xaa	Glu	Trp	Arg	Glu	Leu	Asp	Leu	Ala	Gln	Arg
		35					40					45			
Val	Leu	Tyr	Arg	Asp	Val	Met	Leu	Glu	Asn	Tyr	Arg	Asn	Leu	Val	Ser
	50					55					60				
Leu	Val	Gly	Phe	Pro	Phe	Ser	Lys	Pro	Gly	Ile	Ile	Ser			
65					70						75				

<210> 4887

<211> 2271

<212> DNA

<213> Homo sapiens

<400> 4887

nntttttttt tttttttttt aaaggagacac ctgcaccccc atgtttattg cagcaatatt
 60
 cacaatagcc ttgtagtatt agcgcttaga ggcatttaaa cagcctctct cctccagact
 120
 acttcactgt agtttattat ccttgacctt ccacaatgtg attaccaacc gctaggatga
 180
 gttgcatctt attataaagt agcaaattac aagattgtaa cattagactt ttaagaaaa
 240
 tccagtcagc ttttatacta atccatctta atttctaggt tactcagaat tccaggtatt
 300
 ctgatttgga ctcacatctc gtattgtatt gcctgtattt aactaggaag ttactgcca
 360

```

Ile Ser Asn Leu Gln Lys Leu Ile Ser Leu Asp Leu Tyr Asp Asn Gln
 50          55          60
Ile Glu Glu Ile Ser Gly Leu Ser Thr Leu Arg Cys Leu Arg Val Leu
65          70          75          80
Leu Leu Gly Lys Asn Arg Ile Lys Lys Ile Ser Asn Leu Glu Asn Leu
          85          90          95
Lys Ser Leu Asp Val Leu Asp Leu His Gly Asn Gln Ile Thr Lys Ile
          100          105          110
Glu Asn Ile Asn His Leu Cys Glu Leu Arg Val Leu Asn Leu Ala Arg
          115          120          125
Asn Phe Leu Ser His Val Asp Asn Leu Asn Gly Leu Asp Ser Leu Thr
          130          135          140
Glu Leu Asn Leu Arg His Asn Gln Ile Thr Phe Val Arg Asp Val Asp
145          150          155          160
Asn Leu Pro Cys Leu Gln His Leu Phe Leu Ser Phe Asn Asn Ile Ser
          165          170          175
Ser Phe Asp Ser Val Ser Cys Leu Ala Asp Ser Ser Ser Leu Ser Asp
          180          185          190
Ile Thr Phe Asp Gly Asn Pro Ile Ala Gln Glu Ser Trp Tyr Lys His
          195          200          205
Thr Val Leu Gln Asn Met Met Gln Leu Arg Gln Leu Asp Met Lys Arg
          210          215          220
Ile Thr Glu Glu Glu Arg Arg Met Ala Ser Val Leu Ala Lys Lys Glu
225          230          235          240
Glu Glu Lys Lys Arg Glu Ser His Lys Gln Ser Leu Leu Lys Glu Lys
          245          250          255
Lys Arg Leu Thr Ile Asn Asn Val Ala Arg Gln Trp Asp Leu Gln Gln
          260          265          270
Arg Val Ala Asn Ile Ala Thr Asn Glu Asp Arg Lys Asp Ser Asp Ser
          275          280          285
Pro Gln Asp Pro Cys Gln Ile Asp Gly Ser Thr Leu Ser Ala Phe Pro
          290          295          300
Glu Glu Thr Gly Pro Leu Asp Ser Gly Leu Asn Asn Ala Leu Gln Gly
305          310          315          320
Leu Ser Val Ile Asp Thr Tyr Leu Val Glu Val Asp Gly Asp Thr Leu
          325          330          335
Ser Leu Tyr Gly Ser Gly Ala Leu Glu Ser Leu Asp Arg Asn Trp Ser
          340          345          350
Val Gln Thr Ala Gly Met Ile Thr Thr Val Ser Phe Thr Phe Ile Glu
          355          360          365
Phe Asp Glu Ile Val Gln Val Leu Pro Lys Leu Lys Ile Lys Phe Pro
          370          375          380
Asn Ser Leu His Leu Lys Phe Lys Glu Thr Asn Leu Val Met Gln Gln
385          390          395          400
Phe Asn Ala Leu Ala Gln Leu Arg Arg Tyr
          405          410

```

<210> 4885

<211> 489

<212> DNA

<213> Homo sapiens

<400> 4885

cgcttcctga aaaaaacaaa acaaaagctg accgtatgtc ctatcatcaa tggggaagac
 180
 caccttcggt tgttgaactt tcaacacaat ttataactc ggatacaaaa tatttcta
 240
 ctacagaagt taatatcggt ggatttatat gataaccaga ttgaagaaat tagtgggctt
 300
 tcgactctga gatgtcttcg tgccttctg ttggggaaaa acagaatcaa gaaaatctca
 360
 aatctggaga atctaaaaag cttagatgtc ttggatcttc atggaaatca gattaccaa
 420
 attgaaaata ttaatcattt gtgtgagttg agagttttaa atcttgccag gaacttttta
 480
 agtcagtgtg ataactttaa tgggctggat tcaactaactg aacttaactt gcgacacaat
 540
 caaatcactt tcgtgagaga tgtggataat ttgcctgcc tccaacatct ctttctcagc
 600
 ttaacaata tatctagttt tgacagtgtt tcctgccttg ctgactcttc ttcctctcg
 660
 gacatcacct ttgatggcaa tcccatagct caagagtcac ggtacaaaca cactgtcctt
 720
 cagaatatga tgcagctgcg ccagctagat atgaagagaa tcacggaaga agaaaggcgt
 780
 atggcatctg ttttagccaa aaaagaggaa gagaagaagc gggaaagtca taaacaatct
 840
 ttgcttaagg agaagaaaag gttaacaatt aacaacgtag ctgcacagtg ggacttgcaa
 900
 caacgagtag ccaatattgc tacaaatgaa gatagaaaag attctgactc tcctcaggac
 960
 ccctgtcaga ttgatggaag caccctctct gcattcccag aggaaacagg gcctctagac
 1020
 tcaggactca acaatgcttt acaaggttta tctgtcatag acacatacct tgttgaagt
 1080
 gacggggata cactttccct atatggctca ggagcactgg aatctctgga taggaattgg
 1140
 agtggttcaa cagcaggaat gatcacaaca gtctccttca ctttcataga atttgatgaa
 1200
 atcgccaag tgettccaa actgaagatt aagtttcta attctctgca ccttaaattc
 1260
 aaggaaacaa atcttgtaat gcagcaattt aacgcactag cccaactccg tcggtattga
 1320
 ccagttggac aattgatcct caaggaaatc cagttggtcc attttaacac t
 1371

<210> 4884<211> 410

<212> PRT

<213> Homo sapiens

<400> 4884

Thr	Ala	Gly	Phe	Ile	Trp	Leu	Phe	Lys	His	His	Arg	Phe	Leu	Lys	Lys
1				5					10					15	
Thr	Lys	Gln	Lys	Leu	Thr	Val	Cys	Pro	Ile	Ile	Asn	Gly	Glu	Asp	His
		20						25					30		
Leu	Arg	Leu	Leu	Asn	Phe	Gln	His	Asn	Phe	Ile	Thr	Arg	Ile	Gln	Asn
		35					40						45		

cagggtgacct gctgttggtc tggagtaaga ttcctgtgag tgacctcaggc agcaatggta
 780
 aatactgggg ctgcatgcag cgcttggcct cctgtccaga ctctgggtg cctagagtgc
 840
 caggggctga caaagaagaa gtggaggcag tgaccgcact ggcgtccctc tctgtgggca
 900
 tcctggctga agataggtaa tgccagacnc tgggccctgg gccgcagcc tctccaccgc
 960
 ttcattctc cctgcttgaa gaccccggt cgcctatgca gccacccaa cctcccagg
 1020
 cttcctgacc aggggtgaga ggaagcttag ctaaggccct tgctgcagcc ctgggtgtcc
 1080
 agcatccac cctgtccct cccacaggc cctcggagca gctgggtggag gaggaagaac
 1140
 ctatgaatct ctaaggctct ggaaccatct gcccgccac catgcccttg ggacctggtt
 1200
 ctcttctaac ccctggcaat agccccatt cctgggtctt tagagatcct gtgggcaagt
 1260
 agttggaacc agagaacagc ctgcctgctt tgacagttat cccagggagc gtgagaaaat
 1320
 ccctgggtct aga
 1333

<210> 4882

<211> 100

<212> PRT

<213> Homo sapiens

<400> 4882

Xaa	Phe	Phe	Phe	Thr	Cys	Glu	Ser	Phe	Phe	Ile	Arg	Glu	Glu	Ala	Ser
1				5						10				15	
Arg	Glu	Ala	Thr	Gly	Val	Glu	Asn	Arg	Val	Thr	Ser	Pro	Leu	Pro	Pro
			20					25					30		
Leu	Pro	Phe	Leu	Pro	Ser	Gln	Pro	Leu	Gly	Phe	Gly	Tyr	Met	Thr	Gln
		35					40					45			
Gln	Leu	Met	Asn	Leu	Ala	Gly	Gly	Ala	Val	Val	Leu	Ala	Leu	Glu	Gly
	50					55				60					
Gly	His	Asp	Leu	Thr	Ala	Ile	Cys	Asp	Ala	Ser	Glu	Ala	Cys	Val	Ala
65					70					75				80	
Ala	Leu	Leu	Gly	Asn	Arg	Val	Ser	Arg	Leu	Pro	Pro	Pro	Ser	Met	Leu
				85					90					95	
Leu	Ser	Gly	Arg												
				100											

<210> 4883

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 4883

nnagatctaa cagagaacct ggactgtctc ctatcatgat tcccgggaaa tctcgtcttg
 60
 tttctggccg ggctgcgaac aacgtgaact gcgggcttca tctggttatt caaacatcat
 120

```
<210> 4881
<211> 1333
<212> DNA
<213> Homo sapiens
```

60	nnntttttttt	ttacatgtga	gtcattcttt	attagggagg	aagcaagcag	ggaagccaca
120	ggggtagaga	acaggggtcac	ctctccactc	ccgccccctc	cattttctcc	ctcccaacct
180	ctagggtttt	gatacatgac	gcagcaactg	atgaacctgg	caggaggcgc	agtgggtgctg
240	gccttgagg	gtggccatga	cctcacagcc	atctgtgacg	cctctgaggc	ctgtgtggct
300	gctcttctg	gtaacaggg	gagccgtctc	cctcccccat	ccatgcttct	gtcaggcagg
360	taagcccggc	tctcaggact	acccaaggaa	caggcagatg	ggatgggaca	gggtgggagt
420	ggccaagcct	gaaacaaggt	aggcgaagcg	aaagcctctg	ttccaagtta	ggtccaggca
480	gcatctcctg	gcctaggtag	agtgtgcttg	tggctagaag	gctggggccc	ctgggggtggg
540	agtgagctgg	gcctgtgggt	ccctgaaaga	ctgggtggctg	atgtactgtt	ttctataggt
600	ggatccgggt	tgaggaagaa	gctggaaaca	gaaacccaac	ctcaatgcca	tccgctctct
660	ggaggccgtg	atccgggtgc	acagtaagtg	tggagatggg	acactcgctg	agctcagact
720	gaaggatctt	ggtggtacct	tgccccaccg	tggccagatc	ctagggcttc	cggtgccagg

ctttgaaccg gtctcttaga agaagacaca catcctgggt gtacagtgggt gaaatgggga
 720
 gtgggtgccc attctgaaaa acgaggcatt cctgctcatt ccctctgctt agctgggtggg
 780
 caggggagag agggaaatgc caaaaacttg gagtgaagga tgatgctatt ttttattttt
 840
 aaatatatct tcaggttatt ttcttactgt tgcttcagat ctaatgtaaa aggcagatgt
 900
 cccctcctct ccacccccga cgctgacccc ggcctcagtc acggctcttt gcatgatcac
 960
 agttctgtgt tctggcctgt ggcagggccg ggaagggccg ctggcttccg aacagacgtg
 1020
 gttgctctcc acgaggcgca tggggagccc gcgggcccta agctttgtcg cagatgtcat
 1080
 cattggcaga attacttgct ttgaaaaata agtagcattg ctgaaacaca caaccgaatt
 1140
 ctctacgatg gccatttget cattgtcttt cctctgtgtg tagtgagtga ccctggcagt
 1200
 gtttgctgc tcagagtggc ccctcagaac aacagggctg gccttgga aaacccaaaa
 1260
 caggactgtg gtgacaactc tggtcagggtg tgatttgaca tgagggccgg aggcggttgc
 1320
 tgacggcagg actggagagg ctgcgtgccc ggcactggca gcgaggctcg tgtgtcccc
 1380
 aggcagatct gggcactttc ccaaccagg tttatgcgtc tccaggaag cctcggtgcc
 1440
 agagtgggtg gcagatctga ccacccccac agaccagaaa caaggaattt ctgggattac
 1500
 ccagtcccc ttcaaccag ttgatgtaac cacctcattt ttacaaaata cagaatctat
 1560
 tctactcagg ctatgggcct cgtcctcact cagttattgc gagtgttgc gtccgcatgc
 1620
 tccgggcccc acgtggctcc tgtgctctag atcatgggtg ccccccgcc ctgtgggttg
 1680
 aatcgatgcc acggattgca ggccaaattt cagatcgtgt ttccaaacac ccttgctgtg
 1740
 ccctttaatg ggattgaaag cacttttacc acatggagaa atatattttt aatttgtgat
 1800
 gcttttctac aaggtccact atttctgagt ttaatgtgtt tccaacactt aaggagactc
 1860
 taatgaaagc tgatgaattt tcttttctgt ccaacaagt aaaataaaaa taaaagtcta
 1920
 tttagatggt gaaaaaaaaa a
 1941

<210> 4880

<211> 202

<212> PRT

<213> Homo sapiens

<400> 4880

Met	Val	Arg	Ser	Ala	His	His	Ser	Gly	Thr	Glu	Ala	Ser	Leu	Glu	Thr
1					5				10				15		
His	Lys	Pro	Gly	Leu	Gly	Lys	Cys	Pro	Asp	Leu	Pro	Gly	Gly	His	Thr

agtgtctcca tttctcatgc agttgtgttc attttctcat ga
1182

<210> 4878

<211> 122

<212> PRT

<213> Homo sapiens

<400> 4878

Met	Ala	Val	Ser	His	Ser	Val	Lys	Glu	Arg	Thr	Ile	Ser	Glu	Asn	Ser
1				5					10					15	
Leu	Ile	Ile	Leu	Leu	Gln	Gly	Leu	Gln	Gly	Arg	Val	Thr	Thr	Val	Asp
			20				25					30			
Leu	Arg	Asp	Glu	Ser	Val	Ala	His	Gly	Arg	Ile	Asp	Asn	Val	Asp	Ala
		35				40					45				
Phe	Met	Asn	Ile	Arg	Leu	Ala	Lys	Val	Thr	Tyr	Thr	Asp	Arg	Trp	Gly
50					55					60					
His	Gln	Val	Lys	Leu	Asp	Asp	Leu	Phe	Val	Thr	Gly	Arg	Asn	Val	Arg
65				70					75				80		
Tyr	Val	His	Ile	Pro	Asp	Asp	Val	Asn	Ile	Thr	Ser	Thr	Ile	Glu	Gln
			85					90					95		
Gln	Leu	Gln	Ile	Ile	His	Arg	Val	Arg	Asn	Phe	Gly	Gly	Lys	Gly	Gln
			100				105						110		
Gly	Arg	Trp	Glu	Phe	Pro	Pro	Lys	Lys	Leu						
			115				120								

<210> 4879

<211> 1941

<212> DNA

<213> Homo sapiens

<400> 4879

gttctgtgttc gccatcagca tcgccatcaa caatgcctac atcctgtaca aaatgtcaga
60
cgcctaccac gtgaagaggt acagccgggc gcagtttgga gagagactcg tcagagagct
120
gctgggcttg gaggatgcct ctccgaccca ctgatgctgg gggcgagga ctcggtcaag
180
ggaggggcaa gaggaggagg agagcctgcc gttccaactt gccatcaga gaccgggaca
240
cggcctggtg tgtggcttgc tgctggggag ggatgcacag ggctcctga gggacaggat
300
ggacctggtc agaggacggt tgctgtcctc atttgcttcc caagaagagc atgtcctccc
360
tcgagaaaaca gtgccggcgg tgtgatgagc acttacaccc acgttctcaa gggcagattc
420
tctcatgaca tccgtggagc ttgcgaggca gcgtggactg gtgactgtga aggaaggccc
480
ccgtggtaga atgagctgga gcacgtctta agagagatgc ctgcttccta aagatctaca
540
gcaatctggg acgtgggtca agttcaagac ttgaaggaag caaagacgcc ctgcatgggt
600
acaatggctc aggtgtcagg ggaggccgga ggttttccag catttgctc atgccagcac
660

```
<210> 4877
<211> 1182
<212> DNA
<213> Homo sapiens
```

4055

gacctggctt gggtagagat gatcgtccac ccagttcttg acagcccaa tgctgttcat
 540
 gaggtggaga agtggctgcc ccggctgcat gctcttgctg taggaactgg cttgggtaga
 600
 gatgatgcgc ttctcagaaa tgtccagggc attttggaag tgtcaaaggc caggacatc
 660
 cctgtgttca tcgacgcgga tggcctgtgg ctggctcgtc agcagccggc cctcatccat
 720
 ggctaccgga aggctgtgct cactcccaac cacgtggagt tcagcagact gtatgacgt
 780
 gtgctcagag gccctatgga cagcgtatgac agccatggat ctgtgctaag actcagccaa
 840
 gccctgggca acgtgacggt ggtccagaaa ggagagcgcg acatcctctc caacggccag
 900
 caggtgcttg tgtgcagcca ggaaggcagc agccgcaggt gtggagggca aggggacctc
 960
 ctgtcgggct ccctgggcgt cctgggtacac tgggcgctcc ttgctggacc acagaaaaca
 1020
 aatgggtcca gccctctcct ggtggcgcg tttggcgctt gctctctcac caggcagtgc
 1080
 aaccaccaag ccttcagaa gcacggtcgc tccaccacca cctccgacat gatcgccgag
 1140
 gtgggggccc ccttcagcaa gctctttgaa acctgagccc gcgcagacca gaagtaaaca
 1200
 ggcaccttgg acgggggaga gcgtgtgtgt gatgggaaaa tccggaccca cgcgt
 1255

<210> 4876

<211> 230

<212> PRT

<213> Homo sapiens

<400> 4876

Leu	Ala	Trp	Val	Glu	Met	Ile	Val	His	Pro	Val	Leu	Asp	Ser	Pro	Asn
1				5					10					15	
Ala	Val	His	Glu	Val	Glu	Lys	Trp	Leu	Pro	Arg	Leu	His	Ala	Leu	Val
			20					25					30		
Val	Gly	Thr	Gly	Leu	Gly	Arg	Asp	Asp	Ala	Leu	Leu	Arg	Asn	Val	Gln
			35				40					45			
Gly	Ile	Leu	Glu	Val	Ser	Lys	Ala	Arg	Asp	Ile	Pro	Val	Val	Ile	Asp
			50				55				60				
Ala	Asp	Gly	Leu	Trp	Leu	Val	Ala	Gln	Gln	Pro	Ala	Leu	Ile	His	Gly
65					70					75				80	
Tyr	Arg	Lys	Ala	Val	Leu	Thr	Pro	Asn	His	Val	Glu	Phe	Ser	Arg	Leu
				85				90						95	
Tyr	Asp	Ala	Val	Leu	Arg	Gly	Pro	Met	Asp	Ser	Asp	Asp	Ser	His	Gly
			100					105						110	
Ser	Val	Leu	Arg	Leu	Ser	Gln	Ala	Leu	Gly	Asn	Val	Thr	Val	Val	Gln
			115				120					125			
Lys	Gly	Glu	Arg	Asp	Ile	Leu	Ser	Asn	Gly	Gln	Gln	Val	Leu	Val	Cys
			130				135					140			
Ser	Gln	Glu	Gly	Ser	Ser	Arg	Arg	Cys	Gly	Gly	Gln	Gly	Asp	Leu	Leu
145					150					155				160	
Ser	Gly	Ser	Leu	Gly	Val	Leu	Val	His	Trp	Ala	Leu	Leu	Ala	Gly	Pro

cgaacacatg gcacccctgcc aggatgacct gaagtcaccc tcacctttcc ttccacata
 780
 aagccggccc atacaccttt tctttggaac taaccaccca gatcttagaa gatgtacacg
 840
 tgcttctttc ctttttccta ctctacctgg ctagtcttta gatatgtttt tcttcgtatg
 900
 tgggtgttat acatttcaca tgaatatatc aaacttttca ttcaaaaa
 948

<210> 4874

<211> 128

<212> PRT

<213> Homo sapiens

<400> 4874

Met	Met	Ser	Glu	His	Asp	Leu	Ala	Asp	Val	Val	Gln	Ile	Ala	Val	Glu
1				5					10					15	
Asp	Leu	Ser	Pro	Asp	His	Pro	Gly	Thr	Glu	Leu	Trp	Asp	Ser	Val	Val
			20					25					30		
Leu	Glu	Asn	His	Val	Val	Thr	Asp	Glu	Asp	Glu	Pro	Ala	Leu	Lys	Arg
		35					40					45			
Gln	Arg	Leu	Glu	Ile	Asn	Cys	Gln	Asp	Pro	Ser	Ile	Lys	Ser	Phe	Leu
	50				55				60						
Tyr	Ser	Ile	Asn	Gln	Thr	Ile	Cys	Leu	Arg	Leu	Asp	Ser	Ile	Glu	Ala
65				70					75					80	
Lys	Leu	Gln	Ala	Leu	Glu	Ala	Thr	Cys	Lys	Ser	Leu	Glu	Glu	Lys	Leu
			85					90					95		
Asp	Leu	Val	Thr	Asn	Lys	Gln	His	Ser	Pro	Ile	Gln	Val	Pro	Met	Val
			100					105					110		
Ala	Gly	Ser	Pro	Leu	Arg	Thr	Thr	Gln	Met	Cys	Asn	Lys	Val	Arg	Trp
		115				120						125			

<210> 4875

<211> 1255

<212> DNA

<213> Homo sapiens

<400> 4875

ntgtacagtc gattccattt ggcccgggga tggtcacacg cgcggggggc ggaactgccg
 60
 tcgccggcgc ggtcggtgtc gcattgctct cggccgcact cgcgctgtac gggccgccac
 120
 tggacgcagt tttagaaaga gcgttttcgc tacgtaaagc acattcgata aaggatatgg
 180
 aaaatacttt gcagctgggtg agaaatatca tacctcctct gtcttcacaa aagcacaaag
 240
 ggcaagatgg aagaataggc gtagttggag gctgtcagga gtacactgga gccccatatt
 300
 ttgcagcaat ctcagctctc aaagtgggag cagacttgct ccacgtgttc tgtgccagtg
 360
 cggccgcacc tgtgattaag gcctacagcc cggagctgat cgtccacca gttcttgaca
 420
 gccccaatgc tgttcattgag gtggagaagt ggctgccccg gctgcatgct cttgtcgtag
 480

tccgcttcac ctcccacca caggttcaag cctcctcagt atctgagaaa ggcgcgaagc
 1320
 ctctacgcag ttgcgacccg aggcgagcaa caac
 1354

<210> 4872
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 4872
 Gly Arg Lys Arg Leu Gln Ser Cys Trp Ala Ala Pro Arg Ser Val Gln
 1 5 10 15
 Gln Pro Leu Arg Pro Cys Cys Cys Ser Ala Ala Trp Gln Ser Pro Ala
 20 25 30
 His Ala Pro Ser Glu Ser Gly Gly His Leu Pro Val Pro Ala Ser Pro
 35 40 45
 Val Pro Ala Pro Ala Ala Trp Ser Val Ser Thr Ala Ala Ala Ala
 50 55 60
 Pro Ala Ala Cys Arg Pro Ala Ala Gly Ala Gly Pro Cys Gln Gly His
 65 70 75 80
 Gln Gly Leu Pro Gly Ser Pro Leu Pro Glu
 85 90

<210> 4873
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 4873
 nccccctag gatgcagaaa gtagatgaca ttccatccac actgtgtgag caaattggag
 60
 agattgcctt gatagaggac tgatgttttt cactgatgag atggtgacca aaagccagcc
 120
 ccactgtgag ttgaactott tcgtgttgac cggccactct ccgtgctctg gatgatgtcg
 180
 gaacacgacc tggccgatgt ggttcaaatt gcagtggag acctgagccc tgaccacca
 240
 ggtacagagc tgtgggacag tgtgtttttg gagaatcatg tagtgacaga tgaagacgaa
 300
 cctgctttga aacgccagcg actagaaatc aattgccagg atccatctat aaagtcattc
 360
 ctgtattcca tcaaccagac aatctgcttg cggttgata gcattgaagc caaattgcaa
 420
 gccctggagg ctacttgtaa atccttagaa gaaaagctgg atctgggtcac gaacaagcag
 480
 cacagcccca tccaggttcc catggtggcc ggctccctc tcaggacaac ccagatgtgc
 540
 aacaaagtgc gatggtgaaga acagaccagg gtgccggggc cttcaggtca cttggggaga
 600
 agcgcgtcac ctctcgccc atgcccgcag cttagtggct cagtttgctg gagatgcgca
 660
 gtgtctgcct cagcagtctc agcagtttct aactaaagct gacttttagtt agaccgaaac
 720

	85		90		95
Glu Ser Gly Cys Cys Lys Val Thr Thr Asn Ser Ser Leu Gly Glu Glu					
	100		105		110
Glu Glu Asn Ala Ile Asp Phe Gln Glu Pro Ser Glu Val					
	115		120		125

<210> 4871

<211> 1354

<212> DNA

<213> Homo sapiens

<400> 4871

```

nntttttttt tttttttttt tttttctaga atccgcttta ttatggcacc tggtaggtct
60
ggtgggatct gagggaggaa gaggctgcag tcttgctggg cagccctcg gtcagtccag
120
cagccctca ggccatgctg ctgctcagct gcatggcaaa gtctgcaca tgctccttca
180
gagtctggcg ggcattgcc tgtgccgct tctccctgc ccgctcctgc tgcagcttgg
240
tcagtctcaa ccgcagccgc tgctcccgcc gcttgaggc ctgcagctgg cgctgggctt
300
tgtcaagggc atcaagggt gctgggctcg ccgcttccag agtaaggcgc tgccacctg
360
gtagctgtgt tcattctgga ttaggctcc ggcggtggg ggcaggcgag catatacgct
420
gagggggaga ctggcctgg ttcgagaggg gagggctgcc gctctggtga aggctgggag
480
ctgcagcctg cttcatctgc ctgggcaccc aaggggcca gtaggtctga aaaggggctg
540
ctaaggccag gctccagcct ccagctggg gagggccgca aagtggcagg tgctgaggcc
600
tcttccacag gaaagcaggt gacatcagca ggtggaggtg gagaaaatgg agttgtggg
660
cctcgccct cggagcagcg cttcctgcat cgtctaagcc ggctgacttc aggggggcca
720
ggtgggtaac tgtgtcctt ggtcttggt gtccggcgca acttgagaa agactcaaat
780
atggtgggga ctgccccct ctttagcctg tgatatccac tgattccac cagctcaaag
840
cagtcctcct caaagtgtt ggagcagaag tagatgtact cggatgccgg gtccacagg
900
ccctggcgc tggggtccag ccgctggcag ttggccagcc acaagcctcg cctcggttg
960
tccttcttgg gaagtctgtg gagccacaaa ccgtgagca ccaggctgtc cacagccctg
1020
ggctcatgct gcccagcac ccagagggg aaacgcagac ccaacacgc cgcacagag
1080
acctccctgc gaccccgccg ggtaagcacc accgcccggg cacagacgag gcaacggagg
1140
cctcgagaag aaaagcagtt tctcagcgt catctggcag gtaacagagt ggggagggtc
1200
caagccggt agacttccg tctccctt cccgactgca ttcagtccg ccgggaccgt
1260

```

```

      1             5             10             15
Leu Trp Ala Ile Ala Leu Ala Leu Pro Leu Leu Phe Val Pro Glu Ser
      20             25             30
Gly Leu Lys Met Pro Ile Val Trp Trp Cys Ser Pro Cys Gln Gly Gln
      35             40             45
Glu Thr Glu Ala Ile Pro Ala Val Ser Arg Gln His Pro Leu Gly Leu
      50             55             60
Ser Leu Gly Trp Gly Tyr Pro Gly Met Gly Asp Phe Ser Tyr Gln Asn
      65             70             75             80
Gly Asp Val Glu Lys Glu Ala Asp Val Pro Arg Leu Val Ala Ser Phe
      85             90             95
Cys Pro Ser His Pro Pro Thr Lys Asp Met Arg Leu Leu Pro Ser Asn
      100            105            110
Leu Leu Gly Ala Ser Pro Asp Arg Thr Pro Ser Gly Ile
      115            120            125

```

<210> 4869
 <211> 418
 <212> DNA
 <213> Homo sapiens

```

<400> 4869
ccccgggaaga gggctgcccc ccataaatgc ggaaacagtt aaatggcgat gggaatagga
60
tggaactca atggtgttgc tacctttgga tggactcgga ggcagcccag cttcctggga
120
caggactgca cggactgcct ggggaggggt ctttggcccc ccggttctctg caggggggct
180
cggggaggcc ctgtgagcag ttggtcacag gtgggtccca ttcgatgcga tctgttctct
240
ccccaacagc cctggagaag ggggacgttg cctgctgtgg ctgcggctgt tttcctggcc
300
tgtgagaggc ggggccagag tggccgttgg gaatctgggt gttgcaaggt gaccacaaac
360
agctctctgg gggaggagga ggaaaatgca attgattttc aggagccttc tgaggctcg
418

```

<210> 4870
 <211> 125
 <212> PRT
 <213> Homo sapiens

```

<400> 4870
Met Ala Met Gly Ile Gly Trp Glu Leu Asn Gly Val Ala Thr Phe Gly
1             5             10             15
Trp Thr Arg Arg Gln Pro Ser Phe Leu Gly Gln Asp Cys Thr Asp Cys
      20             25             30
Leu Gly Arg Gly Leu Trp Pro Pro Gly Ser Cys Arg Gly Ala Arg Gly
      35             40             45
Gly Pro Val Ser Ser Trp Ser Gln Val Gly Pro Ile Arg Cys Asp Pro
      50             55             60
Val Pro Pro Gln Gln Pro Trp Arg Arg Gly Thr Leu Pro Ala Val Ala
      65             70             75             80
Ala Ala Val Phe Leu Ala Cys Glu Arg Arg Gly Gln Ser Gly Arg Trp

```

<211> 148
 <212> PRT
 <213> Homo sapiens

<400> 4866

```

Thr Gly Glu Lys Pro Tyr Lys Cys Glu Val Cys Ser Lys Ala Phe Ser
 1             5             10             15
Gln Ser Ser Asp Leu Ile Lys His Gln Arg Thr His Thr Gly Glu Arg
      20             25             30
Pro Tyr Lys Cys Pro Arg Cys Gly Lys Ala Phe Ala Asp Ser Ser Tyr
      35             40             45
Leu Leu Arg His Gln Arg Thr His Ser Gly Gln Lys Pro Tyr Lys Cys
      50             55             60
Pro His Cys Gly Lys Ala Phe Gly Asp Ser Ser Tyr Leu Leu Arg His
65             70             75             80
Gln Arg Thr His Ser His Glu Arg Pro Tyr Ser Cys Thr Glu Cys Gly
      85             90             95
Lys Cys Tyr Ser Gln Asn Ser Ser Leu Arg Ser His Gln Arg Val His
      100            105            110
Thr Gly Gln Arg Pro Phe Ser Cys Gly Ile Cys Gly Lys Ser Phe Ser
      115            120            125
Gln Arg Ser Ala Leu Ile Pro His Ala Arg Ser His Ala Arg Glu Lys
      130            135            140
Pro Phe Thr Arg
145

```

<210> 4867
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 4867

```

ggatcccaga gggagttcta tctggacttg ccccaagcag gttgctaggc agtagcctca
60
tattccttggt gggaggatga gaaggacaaa aagaggcaac cagcctaggg acatcggcct
120
ccttctccac atccccattc tggtaggaaa agtcacccat gccaggatat cccagccca
180
gagacagccc caggggggtgc tgcttgaga cagccgggat agcttcagtc tctgaccct
240
gacacgggct gcaccaccag acaatgggca ttttcaggcc agactctggc acaaagagaa
300
ggggcagggc caaggctatg gccacaagc tcctcagcag ctgagatggg tgcaggaggt
360
agcgctctac tcccatagct cccactgta t
391

```

<210> 4868
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 4868

```

Met Gly Val Glu Arg Tyr Leu Leu His Pro Ser Gln Leu Leu Arg Ser

```

aggtttgacc tggagttgcc tgatggtaac ncggcagtgc ggggcgtcac ccagctgggc
 240
 ggggcctgct ccccaacctg gagctgcctc attaccgagg acactggctt cgacctggga
 300
 gtcaccattg cccatgagat tgggcacagc ttcggcctgg agcacgacgg cgcgc
 355

<210> 4864

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4864

Leu Gly Ala His Phe Arg Val His Leu Val Lys Met Val Ile Leu Thr
 1 5 10 15
 Glu Pro Glu Gly Ala Pro Asn Ile Thr Ala Asn Leu Thr Ser Ser Leu
 20 25 30
 Leu Ser Val Cys Gly Trp Ser Gln Thr Ile Asn Pro Glu Asp Asp Thr
 35 40 45
 Asp Pro Gly His Ala Asp Leu Val Leu Tyr Ile Thr Arg Phe Asp Leu
 50 55 60
 Glu Leu Pro Asp Gly Asn Xaa Ala Val Arg Gly Val Thr Gln Leu Gly
 65 70 75 80
 Gly Ala Cys Ser Pro Thr Trp Ser Cys Leu Ile Thr Glu Asp Thr Gly
 85 90 95
 Phe Asp Leu Gly Val Thr Ile Ala His Glu Ile Gly His Ser Phe Gly
 100 105 110
 Leu Glu His Asp Gly Ala
 115

<210> 4865

<211> 444

<212> DNA

<213> Homo sapiens

<400> 4865

accggtgaga agccctacaa atgtgaggtc tgcagcaagg ccttctccca gagctctgac
 60
 ctcatcaaac accagcgcac ccacactggc gagcggccct acaaatgtcc ccgttgccgc
 120
 aaggccttcg ccgacagctc ttacctgctt cgccaccagc gcactcactc tggccagaag
 180
 ccctacaagt gccacattg tggcaaggcc ttcggcgaca gctcctacct cctgcgacac
 240
 cagcgcaccc acagccacga gcggccctac agctgcaccg agtgccggcaa gtgctatagc
 300
 cagaactcgt ccctgcgcag ccatcagagg gtgcacaccg gtcagaggcc cttcagctgt
 360
 ggcactctgcg gcaagagctt ctcccagcgg tcggccctta tccccatgc ccgcagccac
 420
 gcccgggaga agcccttcac gcgt
 444

<210> 4866

<210> 4862
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 4862
 Leu Gln Thr Ser Gly Gly Ala Leu Gln Ala Arg Gly Thr Pro Met Ala
 1 5 10 15
 Gly Tyr Leu Lys Leu Val Cys Val Ser Phe Gln Arg Gln Gly Phe His
 20 25 30
 Thr Val Gly Ser Arg Cys Lys Asn Arg Thr Gly Ala Glu His Leu Trp
 35 40 45
 Leu Thr Arg His Leu Arg Asp Pro Phe Val Lys Ala Ala Lys Val Glu
 50 55 60
 Ser Tyr Arg Cys Arg Ser Ala Phe Lys Leu Leu Glu Val Asn Glu Arg
 65 70 75 80
 His Gln Ile Leu Arg Pro Gly Leu Arg Val Leu Asp Cys Gly Ala Ala
 85 90 95
 Pro Gly Ala Trp Ser Gln Val Ala Val Gln Lys Val Asn Ala Ala Gly
 100 105 110
 Thr Asp Pro Ser Ser Pro Val Gly Phe Val Leu Gly Val Asp Leu Leu
 115 120 125
 His Ile Phe Pro Leu Glu Gly Ala Thr Phe Leu Cys Pro Ala Asp Val
 130 135 140
 Thr Asp Pro Arg Thr Ser Gln Arg Ile Leu Glu Val Leu Pro Gly Arg
 145 150 155 160
 Arg Ala Asp Val Ile Leu Ser Asp Met Ala Pro Asn Ala Thr Gly Phe
 165 170 175
 Arg Asp Leu Asp His Asp Arg Leu Ile Ser Leu Cys Leu Thr Leu Leu
 180 185 190
 Ser Val Thr Pro Asp Ile Leu Gln Pro Gly Gly Thr Phe Leu Cys Lys
 195 200 205
 Thr Trp Ala Gly Ser Gln Ser Arg Arg Leu Gln Arg Arg Leu Thr Glu
 210 215 220
 Glu Phe Gln Asn Val Arg Ile Ile Lys Pro Glu Ala Ser Arg Lys Glu
 225 230 235 240
 Ser Ser Glu Val Tyr Phe Leu Ala Thr Gln Tyr His Gly Arg Lys Gly
 245 250 255
 Thr Val Lys Gln
 260

<210> 4863
 <211> 355
 <212> DNA
 <213> Homo sapiens

<400> 4863
 ctgggggctc actttcgggt gcacctggtg aagatggtca ttctgacaga gcctgagggt
 60
 gcccacaaata tcacagccaa cctcacctcg tccctgctga gcgtctgtgg gtggagccag
 120
 accatcaacc ctgaggacga cacggatcct ggccatgctg acctggtcct ctatatcact
 180

ctgggtgtgtg tttcctttca gcgtcaaggg ttccacactg ttgggagtcg ctgcaagaat
120
cggacaggcg ctgagcacct gtggctgacc cgacatctca gggacccatt tgtgaaggct
180
gcgaagggtg agagttaccg gtgtcgaagc gccttcaagc tcctggaggt gaacgagagg
240
caccagattc tgcggcccgg ccttcgggtg ttagactgtg gggcagctcc tggggcctgg
300
agtcagggtg cgggtgcagaa ggtcaacgcc gcaggcacag atcccagctc tcctgttggc
360
ttcgtgcttg gggtagatct tcttcacata ttccccctgg aaggagcaac ttttctgtgc
420
cctgctgacg tgactgacce gagaacctca cagagaatcc tcgaggtgct tcctggcagg
480
agagcagatg tgattctgag cgacatggcg cccaatgcca cagggttccg ggacctcgat
540
catgacaggc tcatcagcct gtgectgacc cttctcagcg tgacccaga catcctgcaa
600
cctgggggga cattcctttg taaaacctgg gctggaagtc aaagccgtcg gttacagagg
660
agactgacag aggaattcca gaatgtaagg atcatcaaac ctgaagccag caggaaagag
720
tcatcagaag tgtacttctt ggccacacag taccacggaa ggaagggcac tgtgaagcag
780
tgaggatttc ttgtgccatt ttcataatgg tcattagctc cttttaagct agaaacgtag
840
cctgagctcc tgaagagttc ctgggagatt tgagctgatt ttggagatgg agcaggacaa
900
gtggggagtc tctctctctc tttctctctc tctcttttta accaaaaaga gatgacaaaa
960
ctaagttcag gggccatgga aaatgaaaaa gtccgctata ttgtgatttg ggaagagaaa
1020
gttatcaaga gaaagagggtg aggatggaag gatggagaaa aacagactgt ggggaaggatc
1080
agaaggaatc cgccgaggca gggatgggtg tgcccatgtg tgccttgacg ggacttcac
1140
ttatagactg ttaaactgtc acacacaaac aggttttcca ccctgtctc gagagcacca
1200
cgcacagatt tccagttctt agtgtggctg tttaaagtag aaaatctggg ggctgggtga
1260
ggccactcat gcctgtaaac ccagggtctt agaaggctga ggctggggga ttgcttgaag
1320
tcaggagtgc aagaccaacc tgggcaacat agcaacaccc cccatgtcta caaaaatgaa
1380
aaacaaaaaa gcaaacaaaa agaaaaatct gaaatttcca tctggggatt aacttctgtc
1440
tttctgggtg acaatatagc aattcacgca ttcttcaagc agcaaaagt cccggaacaa
1500
ttagggaaga cgtatggtct gaatttatcc aggcagtggt tctgctttgg tttttgctgg
1560
aaatttatat cagtgtctgg gctcccaaga acataaatgt aattgccaaa gcaaaaaaaa
1620
aa
1622

ctcttgagct tctgatctg ctctgtccc ccgtctcct cactccctt gcctttccct
 300
 aggttgctcc ctcctgggc tttgtgtgt ttgggagat gtcacctaac caggacattg
 360
 atattcaatc ccatccccct tctcccacc ctgcccact ttgatttaat cctttggctg
 420
 tgggctgagg cctcccaggg aagttgggtg ggggtgggtg tgagaccccc tcagaccagc
 480
 acagagacct gtccttgtgc agtctgcacc ctgcactccc tcccttgctt gtagatgttc
 540
 tggatgacag tagaggaaat ggacaaggtc agtttgaata tcccagaaca cagtgtctg
 600
 tctctccca ccagtcagc tagcttcct tctggacca tagacgaggg gagacccat
 660
 ggatcctctg gctgggaagc acctgacca
 689

<210> 4860

<211> 173

<212> PRT

<213> Homo sapiens

<400> 4860

Met	Arg	Thr	Arg	Leu	Phe	Ala	Val	Pro	Gly	Arg	Val	Ala	Lys	Glu	Asp
1				5					10					15	
Trp	Thr	Leu	Asp	Leu	Glu	Pro	Arg	Gly	Pro	Val	His	Ile	His	Pro	Thr
			20					25					30		
Arg	Val	Ser	Gly	Gly	Leu	Pro	Arg	Cys	Leu	Cys	Trp	Val	Ala	Val	Val
		35					40					45			
Val	Pro	Arg	Gly	Met	Glu	Cys	Pro	Gly	Leu	Leu	Gln	Glu	Leu	Ser	Thr
	50					55				60					
Gln	Gly	Gln	Gly	Glu	Pro	Arg	Glu	Lys	Arg	Pro	Gly	Leu	Leu	Ser	Phe
65				70					75					80	
Leu	Ile	Cys	Ser	Cys	Pro	Pro	Leu	Ser	Ser	Thr	Pro	Leu	Pro	Phe	Pro
			85					90					95		
Arg	Leu	Ser	Pro	Pro	Trp	Ala	Phe	Val	Cys	Phe	Gly	Arg	Cys	His	Leu
			100					105					110		
Thr	Arg	Thr	Leu	Ile	Phe	Asn	Pro	Ile	Pro	Leu	Pro	Pro	Thr	Leu	Pro
		115					120						125		
His	Phe	Asp	Leu	Ile	Leu	Trp	Leu	Trp	Ala	Glu	Ala	Ser	Gln	Gly	Ser
	130					135						140			
Trp	Val	Gly	Trp	Val	Leu	Arg	Pro	Pro	Gln	Thr	Ser	Thr	Glu	Thr	Cys
145				150					155					160	
Pro	Cys	Ala	Val	Cys	Thr	Leu	His	Ser	Leu	Pro	Cys	Leu			
			165					170							

<210> 4861

<211> 1622

<212> DNA

<213> Homo sapiens

<400> 4861

ctgcagactt ccggcggcgc gctgcaggcg cggggaacac caatggcggg gtacttgaag
 60

<211> 269

<212> PRT

<213> Homo sapiens

<400> 4858

```

Xaa Gly Arg Arg Gly Gln Met Glu Glu Tyr Glu Glu Glu Pro Ser Arg
 1           5           10           15
Gly Trp Trp Arg Leu Gly Ser Ser Ser Gln Ala Ala Cys Leu Lys Gln
 20           25           30
Ile Leu Leu Leu Gln Leu Asp Leu Ile Glu Gln Gln Gln Gln Leu
 35           40           45
Gln Ala Lys Glu Lys Glu Ile Glu Glu Leu Lys Ser Glu Arg Asp Thr
 50           55           60
Leu Leu Ala Arg Ile Glu Arg Met Glu Arg Arg Met Gln Leu Val Lys
 65           70           75           80
Lys Asp Asn Glu Lys Glu Arg His Lys Leu Phe Gln Gly Tyr Glu Thr
 85           90           95
Glu Glu Arg Glu Glu Thr Glu Leu Ser Glu Lys Ile Lys Leu Glu Cys
100           105           110
Gln Pro Glu Leu Ser Glu Thr Ser Gln Thr Leu Pro Pro Lys Pro Phe
115           120           125
Ser Cys Gly Arg Ser Gly Lys Gly His Lys Arg Lys Ser Pro Phe Gly
130           135           140
Ser Thr Glu Arg Lys Thr Pro Val Lys Lys Leu Ala Pro Glu Phe Ser
145           150           155           160
Lys Val Lys Thr Lys Thr Pro Lys His Ser Pro Ile Lys Glu Glu Pro
165           170           175
Cys Gly Ser Leu Ser Glu Thr Val Cys Lys Arg Glu Leu Arg Ser Gln
180           185           190
Glu Thr Pro Glu Lys Pro Arg Ser Ser Val Asp Thr Pro Pro Arg Leu
195           200           205
Ser Thr Pro Gln Lys Gly Pro Ser Thr His Pro Lys Glu Lys Ala Phe
210           215           220
Ser Ser Glu Ile Glu Asp Leu Pro Tyr Leu Ser Thr Thr Glu Met Tyr
225           230           235           240
Leu Cys Arg Trp His Gln Pro Pro Pro Ser Pro Leu Pro Leu Arg Glu
245           250           255
Ser Ser Pro Lys Lys Glu Glu Thr Val Ala Ser Lys Ala
260           265

```

<210> 4859

<211> 689

<212> DNA

<213> Homo sapiens

<400> 4859

```

cctgctgagg acatgaggac ccgtcttttt gcagtgccag gcagggtggc caaagaggac
60
tggactctgg acctggagcc ccgtggtcca gttcacattc accccacaag agtttcagga
120
ggcctccac ggtgcctgtg ctgggtggcg gtggtggtgc caagaggaat ggaatgtcct
180
gggctccttc aggagctctc taccaggagg caaggagagc ccagagagaa gcgccttggt
240

```

acaaagggttc taaaatgtga agagtttggt tgaaaaatag tttgtagacc attttattta
1440
aatatatgaa caaccaatgg gctactgcaa tccaagtaaa ctcttcacat tttagaacct
1500
ttgtgaagta tagtaagata aagtaagact gttggtcttt ggcagattcc tctgcccc
1560
cagacaggga catagatata cagataaatg tttatatagt taaagagcgg aggccagggt
1620
gaaaattccc caccccaagc tggctcccca acccaaaaat taccattggc ccctgagaac
1680
acccaaagac caccctccca gatttcacac aatatcaatt gcaggaacag tcgtgcatgg
1740
caaagtatag ttctatgcat ttcacagcac agaaaaccct tctttcagag ggcatgcaag
1800
ttgccggaga ttacaccccc aagtctgggt ctcttgatgat gagcaactta ctggcaaaca
1860
catctcccag tgttgtaagc aggcaaatac attgagcaca ttttgctgta attccatcta
1920
tttgcaatgc ctgcacagtg tctgtctctg gctgttaact tactcattct tgacagaact
1980
ctgctttatt gattgcactt ttttaaaaat gccaaaggca ttttcacact tgtagcttg
2040
accgccacca ctaggggtata agagcaagtg ttctctatgc cttacttget acagtctcct
2100
ccttctttgg agaggattcc cgtaatggta acggtgatgg gggaggctgg tgccaacgac
2160
acaaatacat ttctgtgggt gaaagggtacg gcaaactctc tatctcactt gagaaggctt
2220
tctccttggg atgggtgctg ggtccctttt ggggagtggg gagtcttggg ggggtgtcca
2280
ctgaagaccg gggcttttct ggggtttctt ggctcctcaa ttcacgttta caaacagttt
2340
cagataagga accacagggt tctcttttaa taggagagtg cttaggagtt tttgttttga
2400
cttttgaaaa ttcaggagcc agctttttta caggagtctt tctttctgta cttccaaatg
2460
ggggtagaag tctaaccctt ccacccctc tctccccag cagtccacg cgggtatggg
2520
agagaatgaa gttctttgtc tctaagggt tcaaaccaga aacggaggga cctctgggtc
2580
ccagagggag gaaaatccat gatgtctgct gccaggggag ctattgccac cgcctccttg
2640
ggatgaagta ttgccagcta ccaacagttc ctteccaacg gccatcttcc agccttctta
2700
aacgactcct agcatcttct ggaggctcct gaaggactga agcaaaggaa atctctgaag
2760
ggatttagtc cttgaaaggg agtagggata cttagggtgt tctgtgttga gcgcttcttc
2820
ctatctctcc agcttcatgt atgtgtgtct ttatgtccaa gcaattgagc caacaagtcc
2880
tcagaat
2887

<210> 4858

4042

ggcacaacaa cgggaactag tactgggtta ggtactgggt tgggaactgg actgggattt
 300
 ggaggattta atacacagca gcagcagcag caaactacat taggtgggtct cttcagtcag
 360
 cctacacaag ctectaccca gtccaaccag ctgataaata ctgcgagtgc tctttctgct
 420
 ccaacgctgt tgggagatga gagagatgct attttggcaa aatggaatca actgcaggcc
 480
 ttttggggaa caggaaaagg gtatttcaac aataatattc cgccagtgga attcacacaa
 540
 gaaaatccct tttgccgatt taaggcagta gggtatagtt gcatgcccag taataaagat
 600
 gaagacgggc tagtgggttt agttttcaac aaaaaagaaa cagagattcg aagccaacaa
 660
 caacagttgg tagaatcatt gcataaagtt ttgggaggaa accagaccct tactgtaaat
 720
 gtagagggca ctaaaacatt gccagatgat
 750

<210> 4856

<211> 237

<212> PRT

<213> Homo sapiens

<400> 4856

Met	Ala	Phe	Asn	Phe	Gly	Ala	Pro	Ser	Gly	Thr	Ser	Gly	Thr	Ala	Ala	1	5	10	15
Ala	Thr	Ala	Ala	Pro	Ala	Gly	Gly	Phe	Gly	Gly	Phe	Gly	Thr	Thr	Ser	20	25	30	
Thr	Thr	Ala	Gly	Ser	Ala	Phe	Ser	Phe	Ser	Ala	Pro	Thr	Asn	Thr	Gly	35	40	45	
Thr	Thr	Gly	Leu	Phe	Gly	Gly	Thr	Gln	Asn	Lys	Gly	Phe	Gly	Phe	Gly	50	55	60	
Thr	Gly	Phe	Gly	Thr	Thr	Gly	Thr	Ser	Thr	Gly	Leu	Gly	Thr	Gly		65	70	75	80
Leu	Gly	Thr	Gly	Leu	Gly	Phe	Gly	Gly	Phe	Asn	Thr	Gln	Gln	Gln	Gln	85	90	95	
Gln	Gln	Thr	Thr	Leu	Gly	Gly	Leu	Phe	Ser	Gln	Pro	Thr	Gln	Ala	Pro	100	105	110	
Thr	Gln	Ser	Asn	Gln	Leu	Ile	Asn	Thr	Ala	Ser	Ala	Leu	Ser	Ala	Pro	115	120	125	
Thr	Leu	Leu	Gly	Asp	Glu	Arg	Asp	Ala	Ile	Leu	Ala	Lys	Trp	Asn	Gln	130	135	140	
Leu	Gln	Ala	Phe	Trp	Gly	Thr	Gly	Lys	Gly	Tyr	Phe	Asn	Asn	Asn	Ile	145	150	155	160
Pro	Pro	Val	Glu	Phe	Thr	Gln	Glu	Asn	Pro	Phe	Cys	Arg	Phe	Lys	Ala	165	170	175	
Val	Gly	Tyr	Ser	Cys	Met	Pro	Ser	Asn	Lys	Asp	Glu	Asp	Gly	Leu	Val	180	185	190	
Val	Leu	Val	Phe	Asn	Lys	Lys	Glu	Thr	Glu	Ile	Arg	Ser	Gln	Gln	Gln	195	200	205	
Gln	Leu	Val	Glu	Ser	Leu	His	Lys	Val	Leu	Gly	Gly	Asn	Gln	Thr	Leu	210	215	220	
Thr	Val	Asn	Val	Glu	Gly	Thr	Lys	Thr	Leu	Pro	Asp	Asp							

```

      1           5           10           15
Gly Ser Gln Gly Leu Ser Ser Leu Ala Glu Glu Ala Ala Arg Ala Thr
      20           25           30
Glu Asn Pro Glu Gln Val Ala Ser Glu Gly Leu Pro Glu Pro Val Leu
      35           40           45
Arg Lys Val Glu Leu Pro Val Pro Thr His Arg Arg Pro Val Gln Ala
      50           55           60
Trp Val Glu Ser Leu Arg Gly Phe Glu Gln Glu Arg Val Gly Leu Ala
      65           70           75           80
Asp Leu His Pro Asp Val Phe Ala Thr Ala Pro Arg Leu Asp Ile Leu
      85           90           95
His Gln Val Ala Met Trp Gln Lys Asn Phe Lys Arg Ile Ser Tyr Ala
      100          105          110
Lys Thr Lys Thr Arg Ala Glu Val Arg Gly Gly Gly Arg Lys Pro Xaa
      115          120          125
Ala Ala Glu Arg His Trp Ala Gly Pro Ala Trp Gln His Pro Leu Ser
      130          135          140
Ala Leu Ala Arg Arg Arg Cys Cys Pro Trp Pro Pro Gly Pro Thr Ser
      145          150          155          160
Tyr Tyr Tyr Met Leu Pro Met Lys Val Arg Ala Leu Gly Leu Lys Val
      165          170          175
Ala Leu Thr Val Lys Leu Ala Gln Asp Asp Leu His Ile Met Asp Ser
      180          185          190
Leu Glu Leu Pro Thr Gly Asp Pro Gln Tyr Leu Thr Glu Leu Ala His
      195          200          205
Tyr Arg Arg Trp Gly Asp Ser Val Leu Leu Val Asp Leu Thr His Glu
      210          215          220
Glu Met Pro Gln Ser Ile Val Glu Ala Thr Ser Arg Leu Lys Thr Phe
      225          230          235          240
Asn Leu Ile Pro Ala Val Gly Leu Asn Val His Ser Met Leu Lys His
      245          250          255
Gln Thr Leu Val Leu Thr Leu Pro Thr Val Ala Phe Leu Glu Asp Lys
      260          265          270
Leu Leu Trp Gln Asp Ser Arg Tyr Arg Pro Leu Tyr Pro Phe Ser Leu
      275          280          285
Pro Tyr Ser Asp Phe Pro Arg Pro Leu Pro His Ala Thr Gln Gly Pro
      290          295          300
Ala Ala Thr Pro Tyr His Cys
      305          310

```

<210> 4855

<211> 750

<212> DNA

<213> Homo sapiens

<400> 4855

```

nncgcaggag taacctactt ggtctcctgc tttcgcgaca tggccttcaa ttttggggct
60
ccctcgggca cctccggtac cgctgcagcc accgcggccc ccgcgggtgg gtttggagga
120
tttgggacaa catctacaac tgcaggttct gcattcagct tttctgcccc aactaacaca
180
ggcactactg gactcttttg tggtactcag aacaaagggt ttggatttgg tactgggttt
240

```

gttttgacaca ccccgctttc cagcgcggag tcgggcgggg gtagggcggc gtcgcgtgcg
180
tgacgtcatc cagcggcgcc atcggaggct ccagtggcct tgacctcccg cgtcgtgtag
240
gcctgcgcgg cgatgctgca gttcgtccgg gccggggcgc gggcctggct tcggcctacc
300
ggcagccagg gcctgagttc cctggcgga gaggcagcgc gtgcgaccga gaaccggag
360
caggtggcga gcgaggtct cccggagccc gtgctgcgca aagtcgagct cccggtaccc
420
actcatcgac gccagtgca ggctgggtc gagtccctgc ggggcttcga gcaggagcgc
480
gtgggcctgg ccgacctgca ccccgatgtt ttgccaccg cgcccaggct ggacatactg
540
caccaggttg ctatgtggca gaagaacttc aagagaatta gctatgcaa gaccaagacg
600
agagccgagg tgccggggcgg tggccggaag cctntggccg cagaaaggca ctgggcgggc
660
ccggcatggc agcatccgct ctccgctctg gcgaggagga ggtgttgccc atggcccccg
720
ggccccacaa gttactacta catgctgccc atgaaggtgc gggcgctggg tctcaaagtg
780
gcactgaccg tcaagctggc ccaggacgac ctgcacatca tggactccct agagctgccc
840
accggagacc cacagtacct gacagagctg gcgcactacc gccgctgggg ggactccgta
900
ctcctcgtgg acttaacaca cgaggagatg ccacagagca tcgtggaggc cacctctagg
960
cttaagacct tcaacttgat cccggctgtt ggcctaaatg tgcacagcat gctcaagcac
1020
cagacgtgg tctgacgct gccaccgtc gccttcctgg aggacaagct gctctggcag
1080
gactcacgtt acagaccct ctacccttc agcctgccct acagcgactt ccccgaccc
1140
ctacccacg ctaccaggg ccagcggcc acccgtacc actgttgatg tgaagcacct
1200
cttctgagcc aggcgagcc cctggccgac ttgggagcct taggcccacg cccacccttc
1260
gaggaagggtg tcacctggac cccttcattc caggaggaa gctgaggcca caggagcgg
1320
ccatcgccat tgggaagggg cgactccacg gagagcccag acggggcttc tgcattccatt
1380
ccctcttttt gtttttaaaa taaattgtat ttttgaatca aaaaaaaaaa aaaaaaaaaa
1440
aaaaaaaaaa aaaaaaaaaa aaaaaaa
1467

<210> 4854

<211> 311

<212> PRT

<213> Homo sapiens

<400> 4854

Met Leu Gln Phe Val Arg Ala Gly Ala Arg Ala Trp Leu Arg Pro Thr

cagttttgta agattcagga aaaattagcc caattagagc ttgaaaataa ggaacttcga
 600
 gaattattgt ccatcagcag tgagtctctt caagccagaa aggaaaactc aatggacact
 660
 gcttcccaag ccatcaaata actgaactct gaatgatggc tggagattgt ctatcaagga
 720
 aggaagttac tgtcttccca ttcaagtact gtccattaag tgtcttgcct cagatttgat
 780
 ttaatcttaa ttaaaggat caggtggcaa tttagaattc
 820

<210> 4852

<211> 207

<212> PRT

<213> Homo sapiens

<400> 4852

Met	Ser	Cys	Thr	Ile	Glu	Lys	Ile	Leu	Thr	Asp	Ala	Lys	Thr	Leu	Leu
1				5				10						15	
Glu	Arg	Leu	Arg	Glu	His	Asp	Ala	Ala	Glu	Ser	Leu	Val	Asp	Gln	
		20					25				30				
Ser	Ala	Ala	Leu	His	Arg	Arg	Val	Ala	Ala	Met	Arg	Glu	Ala	Gly	Thr
		35				40					45				
Ala	Leu	Pro	Asp	Gln	Tyr	Gln	Glu	Asp	Ala	Ser	Asp	Met	Lys	Asp	Met
	50				55					60					
Ser	Lys	Tyr	Lys	Pro	His	Ile	Leu	Leu	Ser	Gln	Glu	Asn	Thr	Gln	Ile
65				70					75					80	
Arg	Asp	Leu	Gln	Gln	Glu	Asn	Arg	Glu	Leu	Trp	Ile	Ser	Leu	Glu	Glu
			85				90						95		
His	Gln	Asp	Ala	Leu	Glu	Leu	Ile	Met	Ser	Lys	Tyr	Arg	Lys	Gln	Met
		100					105					110			
Leu	Gln	Leu	Met	Val	Ala	Lys	Lys	Ala	Val	Asp	Ala	Glu	Pro	Val	Leu
		115					120					125			
Lys	Ala	His	Gln	Ser	His	Ser	Ala	Glu	Ile	Glu	Ser	Gln	Ile	Asp	Arg
	130					135					140				
Ile	Cys	Glu	Met	Gly	Glu	Val	Met	Arg	Lys	Ala	Val	Gln	Val	Asp	Asp
145				150					155					160	
Asp	Gln	Phe	Cys	Lys	Ile	Gln	Glu	Lys	Leu	Ala	Gln	Leu	Glu	Leu	Glu
			165				170					175			
Asn	Lys	Glu	Leu	Arg	Glu	Leu	Leu	Ser	Ile	Ser	Ser	Glu	Ser	Leu	Gln
		180					185					190			
Ala	Arg	Lys	Glu	Asn	Ser	Met	Asp	Thr	Ala	Ser	Gln	Ala	Ile	Lys	
		195					200					205			

<210> 4853

<211> 1467

<212> DNA

<213> Homo sapiens

<400> 4853

ntgtgaggtc gcgttcccca gtgttacgga gggtccttga ggcaggagtg aaaattgggt
 60
 ctgggggtta gtcctggggg ggaggtctgg gcacgccggg tcggaccccc tccatcttgc
 120

ctgaagaaac acacggagga catcagcagc gtctacgaga tccgcgagag gctcggctcg
 120
 ggtgccttct ccgaggtggt gctggcccag gagcggggct ccgcacacct cgtggccctc
 180
 aagtgcattcc ccaagaaggc cctccggggc aaggaggccc tggaggagaa cgagatcgca
 240
 gtgctccgta ggatcagtca cccaacatc gtcgctctgg aggatgtcca cgagagccct
 300
 tcccacctct acctggccat g
 321

<210> 4850

<211> 90

<212> PRT

<213> Homo sapiens

<400> 4850

Met	Leu	Leu	Leu	Lys	Lys	His	Thr	Glu	Asp	Ile	Ser	Ser	Val	Tyr	Glu
1				5				10					15		
Ile	Arg	Glu	Arg	Leu	Gly	Ser	Gly	Ala	Phe	Ser	Glu	Val	Val	Leu	Ala
				20				25					30		
Gln	Glu	Arg	Gly	Ser	Ala	His	Leu	Val	Ala	Leu	Lys	Cys	Ile	Pro	Lys
				35			40					45			
Lys	Ala	Leu	Arg	Gly	Lys	Glu	Ala	Leu	Val	Glu	Asn	Glu	Ile	Ala	Val
				50			55					60			
Leu	Arg	Arg	Ile	Ser	His	Pro	Asn	Ile	Val	Ala	Leu	Glu	Asp	Val	His
65					70					75				80	
Glu	Ser	Pro	Ser	His	Leu	Tyr	Leu	Ala	Met						
				85					90						

<210> 4851

<211> 820

<212> DNA

<213> Homo sapiens

<400> 4851

aagatctgag cgagtcgcgt agctgagccc ggcaggggct ggggtggtgc tgctgctatg
 60
 agttgcacca tcgagaagat cctgacagac gccaaagacgc tgctggagag gctacgggag
 120
 cagcatgcgg ccgccgagtc gctggtggat cagtcggcgg cgctgcaccg gcgggtagca
 180
 gctatgcggg aggcggggac agcgcttccg gaccagtatc aagaggatgc atccgatatg
 240
 aaggacatgt ccaaatacaa acctcacatt ctgctgtccc aagagaacac acagattaga
 300
 gacttgcaac aggaaaacag agagctatgg atttccttgg aggaacacca ggatgctttg
 360
 gaacttatca tgagcaaata tcggaaacag atgttacagt taatggttgc taaaaaagcg
 420
 gtggatgctg aaccagtcct gaaagtcac cagtctcact ctgcagaaat tgagagtcag
 480
 attgacagaa tctgtgaaat gggagaagtg atgaggaaag cagttcaggt ggatgatgac
 540

gagaatgaac tcagccctag tctgacagtc ctagatttct gtgaaataag agtattcttc
 2700
 aacttagtgc tcacactcac ataccatgag ggttctctgc aggggttttag gggtttcttg
 2760
 aattttaaag ttttttcaag gcctcttttt gggtaaaaca attg
 2804

<210> 4848
 <211> 242
 <212> PRT
 <213> Homo sapiens

<400> 4848
 Met Arg Leu Arg Arg Phe Gln Ser Val Glu Ser Gly Ala Asn Asn Val
 1 5 10 15
 Val Phe Ile Arg Thr Leu Gly Ile Glu Pro Glu Lys Leu Val His His
 20 25 30
 Ile Leu Gln Asp Met Tyr Lys Thr Lys Lys Lys Lys Thr Arg Val Ile
 35 40 45
 Leu Arg Met Leu Pro Ile Ser Gly Thr Cys Lys Ala Phe Leu Glu Asp
 50 55 60
 Met Lys Lys Tyr Ala Glu Thr Phe Leu Glu Pro Trp Phe Lys Ala Pro
 65 70 75 80
 Asn Lys Gly Thr Phe Gln Ile Val Tyr Lys Ser Arg Asn Asn Ser His
 85 90 95
 Val Asn Arg Glu Glu Val Ile Arg Glu Leu Ala Gly Ile Val Cys Thr
 100 105 110
 Leu Asn Ser Glu Asn Lys Val Asp Leu Thr Asn Pro Gln Tyr Thr Val
 115 120 125
 Val Val Glu Ile Ile Lys Ala Val Cys Cys Leu Ser Val Val Lys Asp
 130 135 140
 Tyr Met Leu Phe Arg Lys Tyr Asn Leu Gln Glu Val Val Lys Ser Pro
 145 150 155 160
 Lys Asp Pro Ser Gln Leu Asn Ser Lys Gln Gly Asn Gly Lys Glu Ala
 165 170 175
 Lys Leu Glu Ser Ala Asp Lys Ser Asp Gln Asn Asn Thr Ala Glu Gly
 180 185 190
 Lys Asn Asn Gln Gln Val Pro Glu Asn Thr Glu Glu Leu Gly Gln Thr
 195 200 205
 Lys Pro Thr Ser Asn Pro Gln Val Val Asn Glu Gly Gly Ala Lys Pro
 210 215 220
 Glu Leu Ala Ser Gln Ala Thr Glu Gly Ser Lys Ser Asn Glu Asn Asp
 225 230 235 240
 Phe Ser

<210> 4849
 <211> 321
 <212> DNA
 <213> Homo sapiens

<400> 4849
 nccatgtgtg gaggcagaga ggcagcatcc aggcgctggt cctctcggga catgctgctg
 60

aaaccaacgt ctaatccaca ggtggtaaat gagggaggag ccaaacctga acttgcaagt
1080
caagccacag aaggatccaa gtcaaatgaa aatgacttct cataggaagt catttggtgt
1140
tggagctgac agtccagtgt cgcaattttg gaaggcaaga tgtgagagag acgagaacca
1200
ttttaggcat agaactacag acattttctga aaaggttggt gatgaagaac ttcagtcttc
1260
tgagtatact tcagtatact agtgcaacaa gggacacaaa gaaattctgt cttataaag
1320
aaagctactt ctcaagggta ttatgtggac tcagccaag ctctcctgtc ccattgtgca
1380
ttgtctgtga catgcaactt acaaaactag caattgtaac aataaatcac agccacttga
1440
caagaaagga tattcattat tttcaaatgg cttttggact atcaaaaaca gtaaggcttt
1500
tgttcagaaa tcacctttag tcaaaagggt taagaagcaa attatttagt agcagaactt
1560
atctcaggaa aggaaaatat gcatggttgg tgagaatcta ataacattaa aatgctggg
1620
caagatgcag taaaaagttg aagagacttt attctcaata agttgattta ctgatgat
1680
gtcatatgat gcaaaaaagg ttttgtgtca ttaactgaaa agtagcagct tctctatcca
1740
ggatgatgag tcaacagggt tcaactaatat ttgtcatgct gtagcatttg taagatttgt
1800
aatgatgaa attcaaagaa aactttttct attgctagga gcctgccaga acaaaggcca
1860
atatataatg ttgtgacatc atatctgata accagagggtc tggatatctac actcctgggtg
1920
ccccatcagt ggttgtctcc ataagtcatt ttgcgttatt aaaaaaaaaa aaagaaatcc
1980
tgatgttgac attatagcac actgctttct ccacagagat gctgatatca aaaacttgaa
2040
gatacagtga agttctgaat aatgttaca aactggttac ctgtatcaaa gacccattta
2100
tgcaaaaatg ttaaaaaaaaa aaaacacca aaacaaaaac ctggacagac agcacataaa
2160
cctcctgcc catacaaaca tccaggggt tctcaaagga agcgttctct acaggatatt
2220
tgaattgaaa ggtgaattgc cagagtactt acaataaaac agccagcttt tgctgagtgc
2280
tttgaaatg aaaaatgact acagaaagta gcctattttg cagacgtttt tcatcacatg
2340
aacaatgga caagtctctg aaaggttctg gggaaaaaaa tttttcttaa agcgacaaga
2400
ctcttagatc taaaaggaaa ctgacttgcc accttgccag aggaattctt gaaatgttc
2460
tgcagccact tggccttgaa aataaagggt gcaactctca agtcttggtc taaccggct
2520
ggaggaacca caagacccaa tgaaatagca ttttctctcc ttttcccagc actagtatat
2580
aacctatgag gaacccttgt ctctgaatct gctcagcttg aaattttgtc tctgaaggaa
2640

530 535 540
 Gly Arg Lys Ala Asp Val Trp Ser Leu Gly Cys Thr Val Val Glu Met
 545 550 555 560
 Leu Thr Glu Lys Pro Pro Trp Ala Glu Tyr Glu Ala Met Ala Ala Ile
 565 570 575
 Phe Lys Ile Ala Thr Gln Pro Thr Asn Pro Gln Leu Pro Ser His Ile
 580 585 590
 Ser Glu His Gly Arg Asp Phe Leu Arg Arg Ile Phe Val Glu Ala Arg
 595 600 605
 Gln Arg Pro Ser Ala Glu Glu Leu Leu Thr His His Phe Ala Gln Leu
 610 615 620
 Met Tyr
 625

<210> 4847

<211> 2804

<212> DNA

<213> Homo sapiens

<400> 4847

ccaacagcag cggagaaacg tttctcttct ctctcagttt gcgcacacca tggcggcccc
 60
 tgcccagcag actactcagc ctggcggcgg gaagcgcaaa ggcaaggctc agtatgtgct
 120
 ggccaagcgc gctcggcgct gcgacgctgg cgggccccgt cagctagagc ccgggctaca
 180
 gggcatcctc atcacctgca atatgaacga gcgcaagtgc gtggaggagg cctacagcct
 240
 cctcaacgaa tacggcgacg acatgtatgg gccagaaaag ttttatgcaa acagtttaca
 300
 gacaaggatc agcagccctc tggaagtga gaggaggatg atgatgcgga ggctgccttg
 360
 aagaaagaag ttggtgacat taaggcatct acagagatga ggtaagaag attccagtca
 420
 gtggaaagtg gagcaataa cggtgtcttc atcaggacac ttgggataga gcctgagaaa
 480
 ttggtgcac atattctcca ggatatgtac aaaaccaaga aaaagaagac tcgagttatt
 540
 ttgcgaatgt taccatctc aggcacatgc aaggcttttt tagaagatat gaaaaatat
 600
 gcagaaacat ttttggaacc ctggttttaa gctccaaaca aaggacatt tcagattgtg
 660
 taaaaatctc gaaataacag tcatgtgaat agagaagaag ttatcagaga attggcagga
 720
 atagtgtgca ccctcaattc agaaaataaa gtggatctca ccaatccaca gtacacagtg
 780
 gtagtagaaa tcatcaaagc tgtctgttgc ctgagtgttg tgaaagatta catgttgttt
 840
 agaaaatata atctccagga ggtggtgaag agccctaagg atccgtcaca gcttaactca
 900
 aagcagggaa atgggaaaga agctaaactg gaatctgcgg acaaatcaga ccaaaacaac
 960
 acagcagaag gaaaaataa ccagcaggta ccagagaata ctgaggagct agggcagaca
 1020

4033

aattggcacc gaagcccaga gggctctgggg gcacaagact gacgccaggg tatgaagagt
2340
gttattttca ttcaaagtgt tattttgttt ttctttccaa tgtctggaga ccaccagggc
2400
atctctgggc tggatgagct cccacaagcc tgagggaaaag gccagcactc gctagcagt
2460
gcaggcagag gccagggctg ccgtccccta gagtcccagg ttggctctgc cagtccctgc
2520
ctttacaaa gatgaatgaa gcaaatgtca tgctgcctta ttcagggag gagagcctg
2580
tctgcctgt ggccatgacc ctgcctctcc caggcagggg cccgcgatgt ggaactgctg
2640
ccactgaggg gggatccagt tttgtcaatg cagttgtctc tgttttacia gttggagtca
2700
ctcttatgct gtaccagtt tctaaactgg agactgtgtg tgccctctgg gctctgagta
2760
cccctgcttt gggcttgggc ctaggtgca ttgaaaagag ctgaaggttg tggcctttgc
2820
gctcctggcc cagcctttgt tcccactgg agcagaagg gagatggacg acacggtggg
2880
ggcatctggc ctggccagtg ccctgatccc agagagccc aggaggtgtc tcaggctggc
2940
tgagtctga cctgctagc cagagccac tccatctggt agaagggaaa gcccatatgc
3000
taccaccagc tgtgtccaaa accgccagct ctgttcttcc tcagccagcc tcgcccaccc
3060
ccttgaggtc tcagcccctt tccctgtag ctctcccct ggagggggaa tggcagcagg
3120
ggttggggaa acagcatctc caagcagctt agagttggcc atatttacct cagcctgggc
3180
gctggtcctt tcttccggcc cctcccctcc aaaatgtgcc tattgctaga gctcctccct
3240
ctcaacaccc agtttccttg ggagttgtca ttaaaggaaa aaaaaa
3286

<210> 4846

<211> 626

<212> PRT

<213> Homo sapiens

<400> 4846

Met	Asp	Glu	Gln	Glu	Ala	Leu	Asn	Ser	Ile	Met	Asn	Asp	Leu	Val	Ala
1				5					10				15		
Leu	Gln	Met	Asn	Arg	Arg	His	Arg	Met	Pro	Gly	Tyr	Glu	Thr	Met	Lys
			20					25					30		
Asn	Lys	Asp	Thr	Gly	His	Ser	Asn	Arg	Gln	Ser	Asp	Val	Arg	Ile	Lys
		35					40					45			
Phe	Glu	His	Asn	Gly	Glu	Arg	Arg	Ile	Ile	Ala	Phe	Ser	Arg	Pro	Val
	50					55					60				
Lys	Tyr	Glu	Asp	Val	Glu	His	Lys	Val	Thr	Thr	Val	Phe	Gly	Gln	Pro
65					70				75					80	
Leu	Asp	Leu	His	Tyr	Met	Asn	Asn	Glu	Leu	Ser	Ile	Leu	Leu	Lys	Asn
			85					90						95	
Gln	Asp	Asp	Leu	Asp	Lys	Ala	Ile	Asp	Ile	Leu	Asp	Arg	Ser	Ser	Ser

gggtcctaca ccagcatcaa cagtgagggg gagttcatcc cagagaccag cgagcagtgc
720
atgctggatc cctgagcag tgcagaaaat tcttgtctg gaagctgcca atccttggac
780
aggtcagcag acagcccatc cttccgaaa tcacgaatgt cccgtgcca gagcttcct
840
gacaacagac aggaatactc agatcgggaa actcagcttt atgacaaagg ggtcaaagg
900
ggaacctacc cccggcgcta ccacgtgtct gtgcaccaca aggactacag tgatggcaga
960
agaacatttc cccgaatacg gcgtcatcaa ggcaacttgt tcacctggg gccctccagc
1020
cgctccctga gcacaaatgg cgagaacatg ggtctggctg tgcaatacct ggacccccgt
1080
gggcgctgc ggagtgcga cagcgagaat gccctctctg tgcaggagag gaatgtgcca
1140
accaagtctc ccagtgcctc catcaactgg cgccggggaa agctcctggg ccagggtgcc
1200
ttcggcaggg tctatttctg ctatgacgtg gacacgggac gtgaacttgc ttccaagcag
1260
gtccaatttg atccagacag tctgagaca agcaaggagg tgagtgtctt ggagtgcgag
1320
atccagttgc taaagaactt gcagcatgag cgcactgtgc agtactatgg ctgtctgcgg
1380
gaccgcgctg agaagacct gaccatcttc atggagtaca tgccaggggg ctcggtgaaa
1440
gaccagttga aggcttacgg tgctctgaca gagagcgtga cccgaaagta cagcgggcag
1500
atcctggagg gcatgtccta cctgcacagc aacatgattg ttcaccggga cattaaggga
1560
gccaacatcc tccgagactc tgctgggaat gtaaagctgg gggactttgg ggccagcaaa
1620
cgctgcaga cgatctgtat gtcggggacg ggcattgcgt ccgtcactgg cacaccctac
1680
tggtatgagc ctgaggtgat cagcggcgag ggctatggaa ggaaagcaga cgtgtggagc
1740
ctgggctgca ctgtggtgga gatgtgaca gagaaaccac cgtgggcaga gtatgaagct
1800
atggccgcca tcttcaagat tgccaccag cccaccaatc ctcagctgcc ctccacatc
1860
tctgaacatg gccgggactt cctgaggcgc atttttgtgg aggtcgcca gagaccttca
1920
gctgaggagc tgctcacaca ccactttgca cagctcatgt actgagctct cagggccaca
1980
cagctgccgg tcgccctttg ctgcatggca gggggctgct gctgggctca gtgaagttgc
2040
tgcttctccc aggcaaggct gtggaccatg gaggggcagc ccagccagcg tcggtctgtg
2100
ccccttccgc cactggggct cagagccggg gtgggggtggc tgcagcctca ggactgggag
2160
ccccagcct gtcagatcca ggagctccag tgtcctgagc tcagcgtgga ggggtagggg
2220
ctgggaacag tgtgcaaggc agccgtgggc cccaccctcg gggatgtgtc ctgacactgc
2280

1475 1480 1485
 Lys Ser Cys Ser Arg Thr Cys Gly Gln Cys Lys Gly Ser Leu Glu Arg
 1490 1495 1500
 Lys Ser Trp Thr Ser Ser Ser Ser Leu Ser Asp Thr Tyr Glu Pro Asn
 1505 1510 1515 1520
 Tyr Gly Thr Val Lys Arg Arg Val Leu Glu Ser Thr Pro Ala Glu Ser
 1525 1530 1535
 Ser Glu Gly Leu Asp Pro Lys Asp Ala Thr Asp Pro Val Tyr Lys Thr
 1540 1545 1550
 Val Thr Ser Ser Thr Glu Lys Gly Leu Ile Val Tyr Cys Val Thr Ser
 1555 1560 1565
 Pro Lys Lys Asp Asp Arg Tyr Arg Glu Pro Pro Pro Thr Pro Pro Gly
 1570 1575 1580
 Tyr Leu Gly Ile Ser Leu Ala Asp Leu Lys Glu Gly Pro His Thr His
 1585 1590 1595 1600
 Leu Lys Pro Pro Asp Tyr Ser Val Ala Val Gln Arg Ser Lys Met Met
 1605 1610 1615
 His Asn Ser Leu Ser Arg Leu Pro Pro Ala Ser Leu Ser Ser Asn Leu
 1620 1625 1630
 Glu Ala Cys Val Pro Ser Lys Ile Val Thr Gln Pro Gln Arg His Asn
 1635 1640 1645
 Leu Gln Pro Phe His Pro Lys Leu Gly Asp Val Thr Asp Ala Asp Ser
 1650 1655 1660
 Glu Ala Asp Glu Asn Glu Gln Val Ser Ala Val
 1665 1670 1675

<210> 4845

<211> 3286

<212> DNA

<213> Homo sapiens

<400> 4845

nccgccgccc gggcccccg catgcagccc cggctgcgga ggtgacactc acggacctta
 60
 gccaccgccg ccgccatgc caccatggac gaacaggagg cattgaactc aatcatgaac
 120
 gatctggttg ccctccagat gaaccgacgt caccggatgc ctggatatga gaccatgaag
 180
 aacaaagaca caggtcactc aaataggcag agtgacgtca gaatcaagtt cgagcacaac
 240
 ggggagaggc gaattatagc gttcagccgg cctgtgaaat atgaagatgt ggagcacaag
 300
 gtgacaacag tatttggaac acctcttgat ctacattaca tgaacaatga gctctccatc
 360
 ctgctgaaaa accaagatga tcttgataaa gcaattgaca ttttagatag aagctcaagc
 420
 atgaaaagcc ttaggatatt gctgttgtcc caggacagaa accataacag ttctctccc
 480
 cactctgggg tgtccagaca ggtgcggatc aaggcttccc agtccgcagg ggatataaat
 540
 actatctacc agccccccga gccagaagc aggacacctt ctgtcagctc ccagaacctt
 600
 ggccgaagct cacctcccc tggctatggt cctgagcggc agcagcacat tgcccggcag
 660

1045 1050 1055
 Gln Asp Ile Phe Asp Pro Ser Arg Asn Met Ala Lys Tyr Arg Asn Ile
 1060 1065 1070
 Leu Ser Ser Gln Ser Met Gln Pro Pro Ile Ile Pro Leu Phe Pro Val
 1075 1080 1085
 Val Lys Lys Asp Met Thr Phe Leu His Glu Gly Asn Asp Ser Lys Val
 1090 1095 1100
 Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met Ile Ser Lys Glu Ile
 1105 1110 1115 1120
 Arg Gln Val Val Arg Met Thr Ser Ala Asn Met Asp Pro Ala Met Met
 1125 1130 1135
 Phe Arg Gln Arg Ser Leu Ser Gln Gly Ser Thr Asn Ser Asn Met Leu
 1140 1145 1150
 Asp Val Gln Gly Gly Ala His Lys Lys Arg Ala Arg Arg Ser Ser Leu
 1155 1160 1165
 Leu Asn Ala Lys Lys Leu Tyr Glu Asp Ala Gln Met Ala Arg Lys Val
 1170 1175 1180
 Lys Gln Tyr Leu Ser Ser Leu Asp Val Glu Thr Asp Glu Glu Lys Phe
 1185 1190 1195 1200
 Gln Met Met Ser Leu Gln Trp Glu Pro Ala Tyr Gly Thr Leu Thr Lys
 1205 1210 1215
 Asn Leu Ser Glu Lys Arg Ser Ala Lys Xaa Ser Ser Glu Met Ser Pro
 1220 1225 1230
 Val Pro Met Arg Ser Ala Gly Gln Thr Thr Lys Ala His Leu His Gln
 1235 1240 1245
 Pro His Arg Val Ser Gln Val Leu Gln Val Pro Ala Val Asn Leu His
 1250 1255 1260
 Pro Ile Arg Lys Lys Gly Gln Thr Lys Asp Pro Ala Leu Asn Thr Ser
 1265 1270 1275 1280
 Leu Pro Gln Lys Val Leu Gly Thr Thr Glu Glu Ile Ser Gly Lys Lys
 1285 1290 1295
 His Thr Glu Asp Thr Ile Ser Val Ala Ser Ser Leu His Ser Ser Pro
 1300 1305 1310
 Pro Ala Ser Pro Gln Gly Ser Pro His Lys Gly Tyr Thr Leu Ile Pro
 1315 1320 1325
 Ser Ala Lys Ser Asp Asn Leu Ser Asp Ser Ser His Ser Glu Ile Ser
 1330 1335 1340
 Ser Arg Ser Ser Ile Val Ser Asn Cys Ser Val Asp Ser Met Ser Ala
 1345 1350 1355 1360
 Ala Leu Gln Asp Glu Arg Cys Ser Ser Gln Ala Leu Ala Val Pro Glu
 1365 1370 1375
 Ser Thr Gly Ala Leu Glu Lys Thr Glu His Ala Ser Gly Ile Gly Asp
 1380 1385 1390
 His Ser Gln His Gly Pro Gly Trp Thr Leu Leu Lys Pro Ser Leu Ile
 1395 1400 1405
 Lys Cys Leu Ala Val Ser Ser Val Ser Asn Glu Glu Ile Ser Gln
 1410 1415 1420
 Glu His Ile Ile Ile Glu Ala Ala Asp Ser Gly Arg Gly Ser Trp Thr
 1425 1430 1435 1440
 Ser Cys Ser Ser Ser Ser His Asp Asn Phe Gln Ser Leu Pro Asn Pro
 1445 1450 1455
 Lys Ser Trp Asp Phe Leu Asn Ser Tyr Arg His Thr His Leu Asp Asp
 1460 1465 1470
 Pro Ile Ala Glu Val Glu Pro Thr Asp Ser Glu Pro Tyr Ser Cys Ser

610 615 620
 Lys Gly Phe Gly Ile Phe Val Glu Gly Val Glu Pro Gly Ser Lys Ala
 625 630 635 640
 Ala Asp Ser Gly Leu Lys Arg Gly Asp Gln Ile Met Glu Val Asn Gly
 645 650 655
 Gln Asn Phe Glu Asn Ile Thr Phe Met Lys Ala Val Glu Ile Leu Arg
 660 665 670
 Asn Asn Thr His Leu Ala Leu Thr Val Lys Thr Asn Ile Phe Val Phe
 675 680 685
 Lys Glu Leu Leu Phe Arg Thr Glu Gln Glu Lys Ser Gly Val Pro His
 690 695 700
 Ile Pro Lys Ile Ala Glu Lys Lys Ser Asn Arg His Ser Ile Gln His
 705 710 715 720
 Val Pro Gly Asp Ile Glu Gln Thr Ser Gln Glu Lys Gly Ser Lys Lys
 725 730 735
 Val Lys Ala Asn Thr Val Ser Gly Gly Arg Asn Lys Ile Arg Lys Ile
 740 745 750
 Leu Asp Lys Thr Arg Phe Ser Ile Leu Pro Pro Lys Leu Phe Ser Asp
 755 760 765
 Gly Gly Leu Ser Gln Ser Gln Asp Asp Ser Ile Val Gly Thr Arg His
 770 775 780
 Cys Arg His Ser Leu Ala Ile Met Pro Ile Pro Gly Thr Leu Ser Ser
 785 790 795 800
 Ser Ser Pro Asp Leu Leu Gln Pro Thr Thr Ser Met Leu Asp Phe Ser
 805 810 815
 Asn Pro Ser Asp Ile Pro Asp Gln Val Ile Arg Val Phe Lys Val Asp
 820 825 830
 Gln Gln Ser Cys Tyr Ile Ile Ile Ser Lys Asp Thr Thr Ala Lys Glu
 835 840 845
 Val Val Phe His Ala Val His Glu Phe Gly Leu Thr Gly Ala Ser Asp
 850 855 860
 Thr Tyr Ser Leu Cys Glu Val Ser Val Thr Pro Glu Gly Val Ile Lys
 865 870 875 880
 Gln Arg Arg Leu Pro Asp Gln Phe Ser Lys Leu Ala Asp Arg Ile Gln
 885 890 895
 Leu Asn Gly Arg Tyr Tyr Leu Lys Asn Asn Met Glu Thr Glu Thr Leu
 900 905 910
 Cys Ser Asp Glu Asp Ala Gln Glu Leu Val Lys Glu Ser Gln Leu Ser
 915 920 925
 Met Leu Gln Leu Ser Thr Ile Glu Val Ala Thr Gln Leu Ser Met Arg
 930 935 940
 Asp Phe Asp Leu Phe Arg Asn Ile Glu Pro Thr Glu Tyr Ile Asp Asp
 945 950 955 960
 Leu Phe Lys Leu Asn Ser Lys Thr Gly Asn Thr His Leu Lys Arg Phe
 965 970 975
 Glu Asp Ile Val Asn Gln Glu Thr Phe Trp Val Ala Ser Glu Ile Leu
 980 985 990
 Thr Glu Ala Asn Gln Leu Lys Arg Met Lys Ile Ile Lys His Phe Ile
 995 1000 1005
 Lys Ile Ala Leu His Cys Arg Glu Cys Lys Asn Phe Asn Ser Met Phe
 1010 1015 1020
 Ala Ile Ile Ser Gly Leu Asn Leu Ala Ser Val Ala Arg Leu Arg Gly
 1025 1030 1035 1040
 Thr Trp Glu Lys Leu Pro Ser Lys Tyr Glu Lys His Leu Gln Asp Leu

4027

tcatgggtgtg gaaggccaaa tgaagctgcc acagggtttc ttgtcagtcc tttgggaaat
 5760
 gggaggaggagt agtttgggga ggagggtggg aaccctaatt tccacagaat gaaattttga
 5820
 tgttaaatga catgtatata aattcttcct taagtgaag ttatgctgca tcgaattgta
 5880
 actgaaagta tagatccaac aaatagagac tgggttctag agagttctgg tctatagaaa
 5940
 cccaaaacta aaatctctca taactcaagt atggaatact ttttttaaag aaattcttat
 6000
 catgggtgtt gtaataatga agacgaattt gactttatgc agtgttctgc agcatgcctc
 6060
 cccacatct catagcacca gggtgtgtct gacctgacat accctgcagc tctcagctgg
 6120
 ctgcagtaac attttgtggg agaaagagga gctggagtta cagaaatgat tgtctcttgg
 6180
 ttctcagttt ttagcccttg agaggacata cttttccagc ctcattgggtta tggcactctt
 6240
 aattaaaatt tcagtgactg tttactggat gaggcagatt tttcacattt ttgcaaatta
 6300
 aatatatttt atatatatta agtttaattt tttcagtttt tttaatgtaa aagcaagtga
 6360
 aattttaata aacttctgta attacaaaaa aaaaaaaaaa aaa
 6403

<210> 4844

<211> 1675

<212> PRT

<213> Homo sapiens

<400> 4844

Gly	Thr	Ser	Cys	Arg	Ser	Arg	Gly	Leu	Ala	Ser	Ala	Gln	Arg	Ser	Asp
1				5					10					15	
Pro	Cys	Leu	Ala	Val	Ala	Ser	Met	Ala	Pro	Thr	Leu	Phe	Gln	Lys	Leu
			20					25					30		
Phe	Ser	Lys	Arg	Thr	Gly	Leu	Gly	Ala	Pro	Gly	Arg	Asp	Ala	Arg	Asp
		35				40						45			
Pro	Asp	Cys	Gly	Phe	Ser	Trp	Pro	Leu	Pro	Glu	Phe	Asp	Pro	Ser	Gln
	50					55					60				
Ile	Arg	Leu	Ile	Val	Tyr	Gln	Asp	Cys	Glu	Arg	Arg	Gly	Arg	Asn	Val
65				70						75				80	
Leu	Phe	Asp	Ser	Ser	Val	Lys	Arg	Arg	Asn	Glu	Asp	Ile	Ser	Val	Ser
			85						90					95	
Asp	Leu	Asn	Thr	Ile	Tyr	Ser	Tyr	Leu	His	Gly	Met	Glu	Ile	Leu	Ser
			100					105					110		
Asn	Leu	Arg	Glu	His	Gln	Leu	Arg	Leu	Met	Ser	Ala	Arg	Ala	Arg	Tyr
		115					120					125			
Glu	Arg	Tyr	Ser	Gly	Asn	Gln	Val	Leu	Phe	Cys	Ser	Glu	Thr	Ile	Ala
	130					135					140				
Arg	Cys	Trp	Tyr	Ile	Leu	Ser	Gly	Ser	Val	Leu	Val	Lys	Gly	Ser	
145				150					155					160	
Met	Val	Leu	Pro	Pro	Cys	Ser	Phe	Gly	Lys	Gln	Phe	Gly	Gly	Lys	Arg
			165					170						175	
Gly	Cys	Asp	Cys	Leu	Val	Leu	Glu	Pro	Ser	Glu	Met	Ile	Val	Val	Glu

gctctacagg atgaacggtg ttcctctcag gccctggcag tccctgaatc cactggggca
4140
ttggaaaaga cagagcacgc ttcagggata ggagatcata gtcaacatgg ccctgggtgg
4200
acactcttga agccatctct aatcaagtgt ttagctgtct catcgtctgt gagcaatgaa
4260
gagatttctc aagagcatat cattatagaa gcagctgaca gtggtcgtgg aagttggact
4320
tcgtgttcaa gcagctccca tgacaacttc caaagccttc caaacccaaa aagctgggat
4380
tttttgaact cttacagaca taccatttg gatgacccca ttgctgaagt tgaacccact
4440
gactctgagc cctattcctg ttctaaaagc tgctctagaa cttgtgggca gtgtaaagga
4500
agcctagaga gaaagagttg gacctcctcc agttctctgt ctgacacgta tgaaccaaac
4560
tatgggacag ttaaacggag agtattggag agcaccacag ctgagtcac tgaaggcttg
4620
gacccaagg atgccactga ccagtttat aaaactgtca cttcaagtac agaaaagggc
4680
ttgatttgt actgtgtcac ctcaccaag aaggacgata ggtataggga gccacctccc
4740
actcctccag gatatttggg gatttcttta gcggacctaa aggaaggacc ccacacacac
4800
ctaaaacctc cagattatag tgtggcagt cagaggtcaa agatgatgca taacagcctc
4860
tctagactgc caccagcttc tctcagtagc aacctcgagg cctgtgttcc atcgaagatt
4920
gtaactcagc ctcagaggca taatttgcag ccattccac ctaaaactagg agatgtgact
4980
gatgcagata gcgaagcaga tgaaaatgaa caagtttcag cagtctagcc tttggatgac
5040
ctatttgaaa accactgaaa gtcgtggagg aatgggcaag aaccacctca tgattctgca
5100
ggccattgct aacgaacagc tcattgctac aaccagtcca gaggttttat tccctctact
5160
ccgagcaatg aaatagacct gagttatgct tcctttcatt taatttctgc agataaatag
5220
tttctgagc aatggatgct atgcctggat accagtctcc actttgcaag ccggaactgc
5280
cttgggacca cagttacaga aaaaatgtaa actcagagtg atccttgtgt atattgctat
5340
agatttttct ttaacaagct attttaaaga taatggcatt attatttcca agccatagct
5400
tgggctgaag gacaaattga aattgtctgc caataccaag gatattctta tatatttgaa
5460
aaataactta ttatttgaat tgttgtggtt ttgtttgtat ttgagagctc ttgttagctg
5520
atattcatgt ttgaggtcat aaaattgtct ctggtctgac caaacagaag tcattctttac
5580
agaggtgata tgcttgatct acacagagat gtgacttgat ctgtagcacc aatgcaatgt
5640
aggtctcagt ttgagagaaa taggaagccc tttgcagttg aggtgttagg aacctgctgg
5700

atccctgatac aagttataag agttttcaaa gtggatcagc aaagttgcta cattatcatc
2520
agtaagaca ccacagctaa agaagtagtt tttcatgctg ttcataaatt tggtttgacc
2580
ggtgcatccg acacatatc tctctgtgaa gtttctgtta ctctgaggg tgcataaaa
2640
cagagaagac ttccagatca gttctccaaa ttagctgata gaattcaact caatggaagg
2700
tattacttaa aaaataacat ggaaacagaa accttatgtt cagatgaaga tgctcaagaa
2760
ctagttaagg aaagccagct atccatgctg cagctcagta ccattgaggt ggccaccag
2820
ctgtcaatga gggactttga tttgtttcgt aatattgaac cgactgagta catcgatgac
2880
cttttttaagt taaattccaa aacaggaaat actcatttga agaggtttga ggacatttga
2940
aaccaagaga cattctgggt tgcctcagaa attttaactg aagcaaata gctcaaacga
3000
atgaagatta ttaagcattt tattaataatt gcacttcatt gtcgagaatg taagaacttc
3060
aattccatgt ttgcaataat aagtggcttg aacctggcat ctgtagcaag actcagagga
3120
acttgggaaa agttaccaag caaatacgag aaacatcttc aagatctaca agacattttt
3180
gatccatcta gaaacatggc aaagtataga aatattctta gtagtcaaag tatgcagcct
3240
ccaattattc cactcttccc tgttgtcaag aaagatatga catttctaca tgaaggaaat
3300
gactccaaag tagatgggtt agtaaacttt gagaagttta gaatgatttc caaggaaatc
3360
cgccaagttg ttcgaatgac ttctgctaac atggaccag ctatgatgtt tcgacagagg
3420
tcaactgagtc aaggaagcac aaattcaaac atgctggatg ttcagggagg tgcacaaaa
3480
aaaagggcac gccgcagctc tctgcttaat gccagaagc tatatgagga tgcccaaag
3540
gcaagggaagg tgaagcagta tctttccagt ctcatgtag agacagatga ggagaagttc
3600
cagatgatgt cattacagtg ggagcctgca tatggtacct tgaccaagaa ttttaagtga
3660
aaaagatcag ccaagnnata atctgaaatg tctccagtgc ctatgaggtc agctggccaa
3720
acaactaaag cccacttgca tcaacccac agagtaagcc aggtgcttca ggtgccagct
3780
gttaatttgc accccatcag gaagaaggga caaacaaga accctgcact gaatacaagt
3840
ttacctcaga aagttttagg aacaactgaa gaaataagt gtaagaagca tacagaagac
3900
actatttctg tggcgtcatc tttacattct agtctctctg catctctca aggtccctc
3960
cacaagggtt acacacttat tccatcagct aaatctgaca acttgtctga ctccagccat
4020
agtgaattt ctccaggtc cagcatcgtg agcaattgtt ctgttgact catgtctgca
4080

tatcaggcta cggagagtga ggtaggagat gtagatttga cacgtcttcc agaaggacct
900
gttgattctg aggatgacga agaggaagat gaagagattg atcgaacaga tccattgcag
960
gggcgagatc ttgttcgaga atgtcttgaa aaagaacctg cagacaaaac tgatgatgac
1020
attgaacaat tgctggagtt tatgcaccag ctccctgcat ttgcaaacaat gaccatgtct
1080
gtaaggagag aactctgctc agtgatgatt tttgaagtgg tagagcaggc tggagctatt
1140
attcttgaag atgggcaaga gcttgactca tggatgttta ttttaaaccg cactgtggaa
1200
atcagtcac cagatggaaa agttgaaaat ttgtttatgg gaaatagttt tggaattact
1260
cccactctgg ataagcagta catgcatgga attgtcagga ctaaagtaga tgattgtcag
1320
tttgtctgca tagcccagca agattattgg agaattttta accatgtgga aaaaaatacc
1380
cataaagttg aggaagaggg agaaattgtt atggtacatg agcatcggga actagaccgg
1440
agtgaacca ggaaaggaca cattgtgatc aaggcaacac ctgagcgtct cataatgcat
1500
ttaatagaag aacattccat cgtggatcca acttatatag aagattttct attaacttac
1560
aggacatttc ttgaaagtcc tttggatgtt gggatcaaac tattggaatg gtttaagatc
1620
gacagcttaa gagataaggt gacacggatt gtattattat gggtaaataa tcattttaat
1680
gattttgaag gtgaccctgc tatgactcga tttctagagg aatttgaaaa aaatctggaa
1740
gatacaaaaga tgaatgggtca tctccgggtta ttgaatattg cctgtgctgc aaaggctaag
1800
tgagagacagg ttgtgctgca aaaggcttcc cgcgagtcct ctctacaatt cagccttaat
1860
ggagggagtg agaagggatt tggatattttt gttgaaggag tagaacctgg tagcaaagct
1920
gctgattcag gactgaaacg tggatgacag attatggaag taaatggaca aaactttgag
1980
aatattacat ttatgaaagc cgttgaaatt ttgaggaata atactcatct tgcacttact
2040
gtgaagacca acatttttgt gttcaaagag ttacttttta ggactgaaca agagaaatct
2100
ggtgttcctc atattcccaa aattgctgaa aaaaaagta atcgccattc tatccagcat
2160
gtgccaggag atattgaaca gacatcacag gagaaaggaa gtaagaaagt taaagcaaat
2220
actgtttcag gtggaagaaa caaatcagg aagattttgg ataaaacacg atttagtacc
2280
ttgcctcaa agctatttag tgatggaggc ctaagccaat cacaagatga cagcattgtg
2340
ggaacaaggc actgtaggca tagtctggct ataatgccca tccctggaac actctcatcc
2400
agcagccctg atctcctgca gcctaccacc agtatgttgg atttttccaa tccctcagat
2460

<213> Homo sapiens

<400> 4842

```

Met Trp Lys Tyr Leu Asp Val His Ser Met His Gln Leu Glu Lys Thr
 1           5           10           15
Thr Asn Ala Glu Met Arg Glu Val Leu Ala Glu Leu Leu Glu Leu Gly
      20           25           30
Cys Pro Glu Gln Ser Leu Arg Asp Ala Ile Thr Leu Asp Leu Phe Cys
      35           40           45
His Ala Leu Ile Phe Cys Arg Gln Gln Gly Phe Ser Leu Glu Gln Thr
      50           55           60
Ser Ala Ala Cys Ala Leu Leu Gln Asp Leu His Lys Ala Cys Ile Gly
65           70           75           80
His Ile His Val Leu Arg Ala Tyr Ile Lys Thr Gln Val Asn Lys Glu
      85           90           95
Leu Glu Gln Leu Gln Gly Leu Val Glu Glu Arg Ser Arg Pro Ala Arg
      100          105          110
Lys Gly Ser Ala Ala Ser
      115

```

<210> 4843

<211> 6403

<212> DNA

<213> Homo sapiens

<400> 4843

```

ggcagcagct gtaggagcag gggcctagca agcgcccagc ggagcgaccc ctgcctggcc
60
gtggctagca tggcccttac gctgttccag aagctcttca gcaagaggac cgggctgggc
120
gcgcccggcc gcgacgcccg ggaccagat tgcgggttca gttggccttt accagagttt
180
gatccaagcc agattcgact gattgtatat caagactgtg aaagacgagg gagaaatgtt
240
ttgtttgact ccagtgttaa gagaagaaat gaggacatat cagtatcgga cttaaatact
300
atttattctt atcttcatgg aatggaaata ttatcaaata tcaggaaca tcagcttaga
360
ttaatgtctg caagagcacg ctatgagaga tacagtggca atcaggttct cttttgttca
420
gaaacgattg ccagatgttg gtatatccta ctttctggat ctgtgcttgt gaaaggctcc
480
atggtcttgc ctcttgcag ttttgtaag cagtttggag gaaaaagagg atgtgattgt
540
cttgatttag agccttcaga aatgattgtg gtagagaatg ccaaagataa tgaagatagt
600
attctacaaa gagaaattcc tgccagacaa tcccgaagaa gatttcggaa aattaactat
660
aaaggagagc gccaaaccat tactgatgat gtggagggtta acagctatct ttctcttcca
720
gctgatctta ccaagatgca tctcacagaa aaccctcatc cacaggtgac tcatgtgtct
780
tctagtcagt ctggtttag cattgccagt gactctggaa gcagcagttt atctgatatac
840

```

gctgttcatt ccactaatat ttatctagta cctattctgt gccagcatt gtctctacct
 1200
 cagtttgcca caaatatgaa aaaaaaaaaa ttcttggaac tgtgaggctt caatgtgttg
 1260
 tggaccaata taaaaataaa ccaatggaaa agaaaaaaaaa aaaaaaaaaa aaa
 1313

<210> 4840

<211> 66

<212> PRT

<213> Homo sapiens

<400> 4840

Xaa Ala Leu Arg Ala Pro Thr Arg Gly Arg Gly Asn Val Val Gly Trp
 1 5 10 15
 Gly Thr Pro Ala Arg Gln Lys Leu Glu Lys Ala Arg Asp Val Ala Arg
 20 25 30
 Asp Pro Gly Thr Ser Pro Ser Ser Pro Gly Pro Pro Gly Pro Asp
 35 40 45
 Gly His Ser Arg Tyr Ser Ala His Ser Val Leu Gly His Pro Ala Pro
 50 55 60
 Ala Val
 65

<210> 4841

<211> 558

<212> DNA

<213> Homo sapiens

<400> 4841

acgcgtgcga gtgtgcggac tcagtggacg acggcggcgg cggcgaaagc ggatgaagac
 60
 cccggagcca acttggttcc gccgcgctg ccccgacccc ggatctgcat gtggaagtac
 120
 ctggacgtcc attccatgca ccagctggag aagaccacca atgctgagat gagggagggtg
 180
 ctggctgagc tgetggagct aggggtgtcct gagcagagcc tgagggacgc catcaccctg
 240
 gacctttct gccacgcgt cattttctgc cgccagcagg gcttctcact ggagcagacg
 300
 tcagcggcct gtgccctgct ccaggatctt cacaaggctt gtattggcca catccacgtc
 360
 ctccgagcct acatcaagac ccaagtgaac aaagagctgg agcagctcca ggggctggtg
 420
 gaggagcgt caaggccagc gaggaaggc tcagcagcaa gttgactgca ctagagcggc
 480
 ccttcagct actccgggta aaggcaagag caagaccaag tgacccccaa cattttcccc
 540
 aataaaggtc tgggccag
 558

<210> 4842

<211> 118

<212> PRT

225		230		235		240									
Arg	Asn	Met	Asp	Lys	Gln	Arg	Gln	Lys	Arg	Leu	Gln	Glu	Gln	Lys	Gln
			245			250					255				
Gln	Glu	Gly	Tyr	Asp	Gly	Gly	Pro	Asn	Leu	Arg	Thr	Lys	Val	Trp	Gln
		260				265					270				
Arg	Gly	Thr	Pro	Ser	Pro	Ser	Pro	Tyr	Val	Ser	Pro	Arg	His	Ser	Pro
		275				280					285				
Trp	Ser	Ser	Pro	Lys	Leu	Pro	Tyr	Gly	Glu	Thr	Thr	Thr	Arg		
		290				295					300				

<210> 4839

<211> 1313

<212> DNA

<213> Homo sapiens

<400> 4839

```

nnggcgctca gggccccccac aagaggtcga gggaatgttg tgggctgggg cacaccagca
60
cggcagaaac tggagaaagc gagagacgtc gccagggacc caggacctc tccctccagt
120
tccccggggc cgcccggccc tgatggccac tcacgtata gcgccactc tgtcctgggc
180
catcccgcg cagcagtgtg gccccagcc cgggcgcctg aatgctctcc ctccggatcg
240
ctgctcgggt cccactttg ggcaccntg ccccgagtc ctgcttcccc ggggcctgct
300
ctgtatcagg cgctgcgcc ttcaagggtg cccggcccgc ctgccctccc caagagccga
360
gtttgcgctc ctcccgaat cgtttgagag aaggacaaac ttttggcagg atggaaatct
420
agatgagcct gtccggagca gaacaccct gattagccag gccaccgcc atccacatct
480
gctcggcaaa gaaggaaggc agcttggtcc agaccttggg gagcagctgc agactgcctg
540
cctagaacag cctccttact ccagcctggc agggaaggaa ggaacctgac ttgcttcgca
600
ggatctggaa gctcagccgg cagagctgag agccgcagtt gcatcctgga gcctgatgct
660
agaagcagct tccgtctttg gggtcttggc gcctcggcct ctgctctgtt cagtttggctg
720
ttgtgttttt ctcccccatg ttggggtggg ggggtacagg gaaataaaat gctttctccc
780
aggccccctaa tcttccccca tgcctccatc agcctcaaag ctgctgacag tcatgaactg
840
caccttccag cctgccccat aagctactca aagcaaattc aaattctctt ctggccaggg
900
ggaagggcag atgctccctc ctctctcaag cctccctggc tcattgatcc attttgaggg
960
catttggggg tcaaagttga gaccagattg cttcagtttg tataaaatta gcatttctta
1020
tcacaccaag gccacacctg ttctctggcc tcacaaacca gtgaggatgt aaaggtttgt
1080
tgagggtggag gaacagaagt gaaatgagca atctgctcca tttagaagtc agtcgcttcg
1140

```

acgcatgccg acgacagtgc agccatggcc attgcagaga tgctcaaagt caatgagcac
 480
 atcaccaacg taaacgtcga gtccaacttc ataacgggaa aggggatcct ggccatcatg
 540
 agagctctcc agcacaacac ggtgctcacg gagctgcgtt tccataacca gaggcacatc
 600
 atgggcagcc aggtggaaat ggagattgtc aagctgctga aggagaacac gacgctgctg
 660
 aggctgggat accattttga actcccagga ccaagaatga gcatgacgag cattttgaca
 720
 agaaatatgg ataaacagag gcaaaaacgt ttgcaggagc aaaaacagca ggagggatac
 780
 gatggaggac ccaatcttag gaccaaagtc tggcaaagag gaacacctag cccttcccct
 840
 tatgtatctc ccaggcactc accgtgggtc tccccaaaac tcccctacgg agagacgaca
 900
 acgcgt
 906

<210> 4838

<211> 302

<212> PRT

<213> Homo sapiens

<400> 4838

Xaa Gly Glu Glu Glu Val Val Ala Ala Phe Gly Lys Lys Glu Ser
 1 5 10 15
 Gln Glu Glu Glu Glu Glu Asp Ser Asp Glu Gly Glu Arg Thr Ile
 20 25 30
 Glu Thr Ala Lys Gly Ile Asn Gly Thr Val Asn Tyr Asp Ser Val Asn
 35 40 45
 Ser Asp Asn Ser Lys Pro Lys Ile Phe Lys Ser Gln Ile Glu Asn Ile
 50 55 60
 Asn Leu Thr Asn Gly Ser Asn Gly Arg Asn Thr Glu Ser Pro Ala Ala
 65 70 75 80
 Ile His Pro Cys Gly Asn Pro Thr Val Ile Glu Asp Ala Leu Asp Lys
 85 90 95
 Ile Lys Ser Asn Asp Pro Asp Thr Thr Glu Val Asn Leu Asn Asn Ile
 100 105 110
 Glu Asn Ile Thr Thr Gln Thr Leu Thr Arg Phe Ala Glu Ala Leu Lys
 115 120 125
 Asp Asn Thr Val Val Lys Thr Phe Ser Leu Ala Asn Thr His Ala Asp
 130 135 140
 Asp Ser Ala Ala Met Ala Ile Ala Glu Met Leu Lys Val Asn Glu His
 145 150 155 160
 Ile Thr Asn Val Asn Val Glu Ser Asn Phe Ile Thr Gly Lys Gly Ile
 165 170 175
 Leu Ala Ile Met Arg Ala Leu Gln His Asn Thr Val Leu Thr Glu Leu
 180 185 190
 Arg Phe His Asn Gln Arg His Ile Met Gly Ser Gln Val Glu Met Glu
 195 200 205
 Ile Val Lys Leu Leu Lys Glu Asn Thr Thr Leu Leu Arg Leu Gly Tyr
 210 215 220
 His Phe Glu Leu Pro Gly Pro Arg Met Ser Met Thr Ser Ile Leu Thr

```
<210> 4837
<211> 906
<212> DNA
<213> Homo sapiens
```

```
<400> 4837
naggggggagg aggaggaggt ggtggcagcc tttggaaga aggagtccca ggaggaagag
60
gaggaagaag acagtgacga aggggaaaga acaattgaaa ctgcaaaagg gattaatgga
120
actgtaaatt atgatagtgt caattctgac aactctaagc caaagatatt taaaagtcaa
180
atagagaaca taaatttgac caatggcagc aatgggagga acacagagtc cccagctgcc
240
attcaccctt gtggaaatcc tacagtgatt gaggacgctt tggacaagat taaaagcaat
300
gaccctgaca ccacagaagt caatttgaac aacattgaga acatcacaac acagaccctt
360
accgcctttg ctgaagccct caaggacaac actgtggtga agacgttcag tctggccaac
420
```

cgtttccccg gtgcccgggt gccatggctc agtgtgcaga cagccgcacc ctcaccactg
 840
 cgctcatgg atctactctc caagaagcac ccgctggaca cactgttcct gctggccggg
 900
 ccagacacgg tgctcacgcc tgacttcctg aaccgctgcc gcctgcatgc catctccggc
 960
 tggcaggcct tctttcccat gcatttccaa gccttcacc cagctgtggc cccaccacaa
 1020
 gggcctgggc cccagagct ggggcccgtga cactggccgc tttgatcgcc aggcagccag
 1080
 cgaggcctgc ttctacaact ccgactacgt ggcagcccgt gggcgccctgg gcgcagctca
 1140
 gaacaagaag aggagctgct ggagagcctg gatgtgtacg agctgttcct ccacttctcc
 1200
 agtctgcatg tgctgcccgc ggtggagcgg cgctgtgca gccgctaccg ggcccagacg
 1260
 tgcagcgca ggctcagtga ggacctgtac caccgctgcc tccagagcgt gcttgagggc
 1320
 ctgggtccc gaaccagct ggccatgcta ctcttgaac aggagcaggg caacagcacc
 1380
 tgacccacc ctgtcccgt gggcccgtgg cattggccac accccacccc acttctcccc
 1440
 caaaaccaga gccacctgcc agcctcgctg ggcagggctg gccgtagcca gaccccaagc
 1500
 tggcccactg gtcccctctc tggctctgtg ggtccctggg ctctggacaa gcaactggggg
 1560
 acgtgcccc agagccaccc acttctcctc ccaaaccag tttccctgcc cctgaagct
 1620
 gctgattcgg gctgtggcct ccacgtattt atgcagtaca gtctgcctga cgccagccct
 1680
 gccctgggc cctgggggct gggctgtaga agagttgttg gggaaggagg gagctgagga
 1740
 gggggcatct cccaacttct cccttttga ccctgccgaa gctccctgcc ttaataaac
 1800
 tggccaagtg tggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
 1846

<210> 4836

<211> 349

<212> PRT

<213> Homo sapiens

<400> 4836

Xaa	His	Phe	Arg	Ser	Ala	Leu	Thr	Ala	His	Pro	Val	Arg	Asp	Pro	Val
1				5				10					15		
His	Met	Tyr	Gln	Leu	His	Lys	Ala	Phe	Ala	Arg	Ala	Glu	Leu	Glu	Arg
			20				25					30			
Thr	Tyr	Gln	Glu	Ile	Gln	Glu	Leu	Gln	Trp	Glu	Ile	Gln	Asn	Thr	Ser
		35				40					45				
His	Leu	Ala	Val	Asp	Gly	Asp	Arg	Ala	Ala	Ala	Trp	Pro	Val	Gly	Ile
	50				55					60					
Pro	Ala	Pro	Ser	Arg	Pro	Ala	Ser	Arg	Phe	Glu	Val	Leu	Arg	Trp	Asp
65				70				75				80			
Tyr	Phe	Thr	Glu	Gln	His	Ala	Phe	Ser	Cys	Ala	Asp	Gly	Ser	Pro	Arg

<400> 4834

Met Thr His Gln Asp Leu Ser Ile Thr Ala Lys Leu Ile Asn Gly Gly
 1 5 10 15
 Val Ala Gly Leu Val Gly Val Thr Cys Val Phe Pro Ile Asp Leu Ala
 20 25 30
 Lys Thr Arg Leu Gln Asn Gln His Gly Lys Ala Met Tyr Lys Gly Met
 35 40 45
 Ile Asp Cys Leu Met Lys Thr Ala Arg Ala Glu Gly Phe Phe Gly Met
 50 55 60
 Tyr Arg Gly Ala Ala Val Asn Leu Thr Leu Val Thr Pro Glu Lys Ala
 65 70 75 80
 Ile Lys Leu Ala Ala Asn Asp Phe Phe Arg Arg Leu Leu Met Glu Asp
 85 90 95
 Gly Met Gln Arg Asn Leu Lys Met Glu Met Leu Ala Gly Cys Gly Ala
 100 105 110
 Gly Met Cys Gln Val Val Val Thr Cys Pro Met Glu Met Leu Lys Ile
 115 120 125
 Gln Leu Gln Ala Cys Trp Thr Pro Gly Arg Pro Ser Ser Gly Leu Gly
 130 135 140
 Leu Ser Thr
 145

<210> 4835

<211> 1846

<212> DNA

<213> Homo sapiens

<400> 4835

nctcatattcc gaagtgccct gacagcccac cctgtgcgtg accctgtgca catgtaccag
 60
 ctgcacaaag ctttcgcccg agctgaactg gaacgcacgt accaggagat ccaggagtta
 120
 cagtgggaga tccagaatac cagccatctg gccgttgatg gggaccgggc agctgcttgg
 180
 cccgtgggta ttccagcacc atcccgcgcc gctcccgtct ttgaggtgct gcgctgggac
 240
 tacttcacgg agcagcacgc tttctcctgc gccgatggct caccocgctg cccactgcgt
 300
 ggggctgacc gggctgatgt ggccgatgtt ctggggacag ctctagagga gctgaaccgc
 360
 cgctaccacc cggccttgcg gctccagaag cagcagctgg tgaatggcta ccgacgcttt
 420
 gatccggccc ggggtatgga atacacgctg gacttgacgc tggaggcact gacccccag
 480
 ggaggccgcc ggcccctcac tcgccgagtg cagctgctcc ggccgctgag ccgcgtggag
 540
 atcttgcttg tgccctatgt cactgaggcc tcacgtctca ctgtgctgct gcctctagct
 600
 gcggctgagc gtgacctggc ccttggtctt ttggaggcct ttgccactgc agcactggag
 660
 cctgggtgatg ctgcggcagc cctgacctg ctgtactgt atgagccgcg ccaggcccag
 720
 cgcgtggccc atgcagatgt cttcgcacct gtcaaggccc acgtggcaga gctggagcgg
 780

```

      20      25      30
Pro His Phe Asn Lys His Leu Leu Gly Ala Glu His Gly Asp Glu Pro
      35      40      45
Arg His Gly Gly Leu Thr Leu Arg Leu Gly Leu His Gln Gln Ser Val
      50      55      60
Leu Gly Gly Gln Asp Gln Leu Arg Val Arg Val Thr Glu Leu Glu Asp
65      70      75      80
Glu Val Arg Asn Leu Arg Lys Ile Asn Arg Asp Leu Phe Asp Phe Ser
      85      90      95
Thr Arg Phe Ile Thr Arg Pro Ala Lys
      100      105

```

<210> 4833

<211> 872

<212> DNA

<213> Homo sapiens

<400> 4833

```

nnctggacag aatttttaaa agcaatgaag ccagttcctt ggatatatcc acgggctttg
60
cttgagaag gaactgagta ggagtgaga agagtcgagt gaagcctggc ccgtgagtg
120
ctcaacaact gagatgaacg tcgactcgct tgcaggcaag ttgtcactca gcagcgatct
180
gaactatata ctgggttcca gaaaaggcag aggttcttac cgaaagcagg ggaggaagcc
240
gcagcccaag gaggtcgta cttgccggga aggtggctcg ggccaggctg cactcaaaac
300
ccgtgctctg tccacactgc tacggggcca gagccaagga agcttcact tttccccca
360
gacagcccca acagcggcta cccaaggag ccagcagcct tgtgtcctgg gatccccagc
420
ccctgcagaa tgaccacca ggatctgagc atcacagcca aactcatcaa tggagggtga
480
gcagggctcg tgggggtgac ctgctgttc cccatcgact tggccaagac tcgcctgcag
540
aaccagcatg ggaaagccat gtacaaagga atgatcgact gcctgatgaa gacggctcgg
600
gcgaggggct ttttcggcat gtaccgagg gctgcagtga acctcactct ggtcactcca
660
gagaaggcca tcaagctggc ggccaacgac tttttccggc ggctgctcat ggaagatggg
720
atgcagcgga acctgaagat ggagatgctt gccgggtgtg gggctgggat gtgccaggtc
780
gtggtgacct gtcccatgga aatgctcaag attcagctgc aggcattgctg gacgcctggc
840
cgtccatcat cagggtcgg cctcagcacc ct
872

```

<210> 4834

<211> 147

<212> PRT

<213> Homo sapiens


```

      370              375              380
Val Leu Asp Ile Tyr Gly Phe Glu Ile Phe Glu Asp Asn Ser Phe Glu
385              390              395              400
Gln Phe Ile Ile Asn Tyr Cys Asn Glu Lys Leu Gln Gln Ile Phe Ile
      405              410              415
Glu Leu Thr Leu Lys Glu Glu Gln Glu Glu Tyr Ile Arg Glu Asp Ile
      420              425              430
Glu Trp Thr His Ile Asp Tyr Phe Asn Asn Ala Ile Ile Cys Asp Leu
      435              440              445
Ile Glu Asn Asn Thr Asn Gly Ile Leu Ala Met Leu Asp Glu Glu Cys
      450              455              460
Leu Arg Pro Gly Thr Val Thr Asp Glu Thr Phe Leu Glu Lys Leu Asn
465              470              475              480
Gln Val Cys Ala Thr His Gln His Phe Glu Ser Arg Met Ser Lys Cys
      485              490              495
Ser Arg Phe Leu Asn Asp Thr Ser Leu Pro His Ser Cys Phe Arg Ile
      500              505              510

```

<210> 4831

<211> 578

<212> DNA

<213> Homo sapiens

<400> 4831

```

cggacggtgg cctcaaagg ccagtcacc aatgccgcca tctgctggc gccgctcagc
60
atgctgagct cagacttcag gccagcctg ccgctgcccc acttcaacaa gcacctgctg
120
ggcgccgagc acggggacga gccgcgccac gggggcctca ctctgcccct gggcctccac
180
cagcagagcg tgctcgccgg ccaggaccag ctgcgcgtcc gtgtgacgga gctggaggac
240
gaggtgcgca acctgcgcaa gatcaatcgg gacctgttcg acttctccac gcgcttcac
300
acgcggccgg ccaagtgagg cccggagacc ccggcccgag gcgcccaggc ctgagcccca
360
tgctccccag caaccagggc ccgcgggtgt ggccccacc agcccaggcc tggactctcc
420
tcagttctgt gtcgtgttcg ggtttttcct ctgtgactgg gccgtcttgg tgtctcgtgg
480
cacgcgtcac agtgggtgta gtctgttttt aacaaaagag gatgaaaagc caaaaaaaaa
540
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
578

```

<210> 4832

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4832

```

Arg Thr Val Ala Leu Lys Gly Pro Val Thr Asn Ala Ala Ile Leu Leu
1      5      10      15
Ala Pro Val Ser Met Leu Ser Ser Asp Phe Arg Pro Ser Leu Pro Leu

```

<210> 4830

<211> 512

<212> PRT

<213> Homo sapiens

<400> 4830

```

Met Ala Lys Met Glu Val Lys Thr Ser Leu Leu Asp Asn Met Ile Gly
 1          5          10          15
Val Gly Asp Met Val Leu Leu Glu Pro Leu Asn Glu Glu Thr Phe Ile
      20          25          30
Asn Asn Leu Lys Lys Arg Phe Asp His Ser Glu Ile Tyr Thr Tyr Ile
      35          40          45
Gly Ser Val Val Ile Ser Val Asn Pro Tyr Arg Ser Leu Pro Ile Tyr
      50          55          60
Ser Pro Glu Lys Val Glu Glu Tyr Arg Asn Arg Asn Phe Tyr Glu Leu
      65          70          75          80
Ser Pro His Ile Phe Ala Leu Ser Asp Glu Ala Tyr Arg Ser Leu Arg
      85          90          95
Asp Gln Asp Lys Asp Gln Cys Ile Leu Ile Thr Gly Glu Ser Gly Ala
      100          105          110
Gly Lys Thr Glu Ala Ser Lys Leu Val Met Ser Tyr Val Ala Ala Val
      115          120          125
Cys Gly Lys Gly Ala Glu Val Asn Gln Val Lys Glu Gln Leu Leu Gln
      130          135          140
Ser Asn Pro Val Leu Glu Ala Phe Gly Asn Ala Lys Thr Val Arg Asn
      145          150          155          160
Asp Asn Ser Ser Arg Phe Gly Lys Tyr Met Asp Ile Glu Phe Asp Phe
      165          170          175
Lys Gly Asp Pro Leu Gly Gly Val Ile Ser Asn Tyr Leu Leu Glu Lys
      180          185          190
Ser Arg Val Val Lys Gln Pro Arg Gly Glu Arg Asn Phe His Val Phe
      195          200          205
Tyr Gln Leu Leu Ser Gly Ala Ser Glu Glu Leu Leu Asn Lys Leu Lys
      210          215          220
Leu Glu Arg Asp Phe Ser Arg Tyr Asn Tyr Leu Ser Leu Asp Ser Ala
      225          230          235          240
Lys Val Asn Gly Val Asp Asp Ala Ala Asn Phe Arg Thr Val Arg Asn
      245          250          255
Ala Met Gln Ile Val Gly Phe Met Asp His Glu Ala Glu Ser Val Leu
      260          265          270
Ala Val Val Ala Ala Val Leu Lys Leu Gly Asn Ile Glu Phe Lys Pro
      275          280          285
Glu Ser Arg Val Asn Gly Leu Asp Glu Ser Lys Ile Lys Asp Lys Asn
      290          295          300
Glu Leu Lys Glu Ile Cys Glu Leu Thr Gly Ile Asp Gln Ser Val Leu
      305          310          315          320
Glu Arg Ala Phe Ser Phe Arg Thr Val Glu Ala Lys Gln Glu Lys Val
      325          330          335
Ser Thr Thr Leu Asn Val Ala Gln Ala Tyr Tyr Ala Arg Asp Ala Leu
      340          345          350
Ala Lys Asn Leu Tyr Ser Arg Leu Phe Ser Trp Leu Val Asn Arg Ile
      355          360          365
Asn Glu Ser Ile Lys Ala Gln Thr Lys Val Arg Lys Lys Val Met Gly

```

cccggagagc gaggacgacg tgaaggcgga gtggcgcccg gcgaggtagc gccaggcgag
60
ctggagacca tggccaaaat ggaggtgaaa acctcacttc tggacaatat gattggagtt
120
ggggatatgg ttcttttaga acctctcaat gaggagacct tcatcaacaa cctcaagaag
180
cgctttgacc acagtgaat atacacttac attggaagtg tggttatata tgttaaccca
240
tateggtctt taccatttta ttaccagag aaagtgaag aatacaggaa cagaaatttt
300
tatgaactga gccctcacat ctttgccctt tcggatgaag catcacagatc cctacgagat
360
caagataagg accaatgtat tctcattact ggggaaagtg gagcaggaaa aacagaggcc
420
agtaagcttg tcatgtccta tgtggcagct gtttgtggaa aaggagcaga agttaatcaa
480
gttaaagaac agcttttaca gtccaacccg gtccctggaag cttttggaaa tgccaaaact
540
gtaaggaatg acaactctc tagatttggc aaatatatgg atattgaatt tgactttaaa
600
ggcgatccac taggaggagt aataagtaac tatcttttag agaaatctcg ggttgtaaa
660
cagccaagag gtgaaagaaa cttccatgtg ttctatcagc tgctctctgg tgctctgaa
720
gagtcctca ataaacttaa gcttgagagg gatttcagca ggtataacta cctgagtctg
780
gattcggcca aagtgaatgg agtggatgat gcagcaaatt ttagaaccgt gcggaatgcc
840
atgcagattg tgggctttat ggatcatgaa gctgagtctg tcttgccggt ggtggcagca
900
gtggtgaaac tggggaacat tgagttcaag cccgaatctc gagtgaatgg tctagatgaa
960
agcaaatca aagataaaaa tgagttaaaa gaaatttgg aattgaccgg cattgatcaa
1020
tcagttctag aacgagcatt cagtttccga acagttgagg ccaaacagga gaaagtttca
1080
actacactga atgtggctca ggcttattat gccctgatg ctctggctaa aaacctctac
1140
agcaggttgt tttcatggtt ggtaaatcga atcaatgaaa gcattaaggc acaacaaaa
1200
gtgagaaaga aggtcatggg tgttctggac atttatggct ttgagatttt cgaggacaac
1260
agctttgagc agttcattat taattattgt aacgaaaagc tgcaacaaat cttcattgaa
1320
cttactctta aagaagagca ggaggagtat atacgggagg atatagaatg gactcacatt
1380
gactacttca ataatgctat catttctgac ctaatagaaa ataacacaaa tggaatcctg
1440
gccatgttgg atgaagagt cctcagacct ggcacagtca ctgatgagac cttcttagaa
1500
aagctgaacc aagtatgtgc caccaccag cattttgaaa gcaggatgag caagtgtctt
1560
cggttctca atgacacgtc tctgctcac agctgttca ggatc
1605

945 950 955 960
 Ile Pro Leu Thr Ala Thr Asn Phe Arg Ile Gln Gly Lys Asp Val Leu
 965 970 975
 Arg Leu Pro Pro Ser Ser Ile Thr Thr Asp Ala Lys Gly Gln Thr Val
 980 985 990
 Leu Arg Ile Thr Pro Asp Met Met Ala Thr Leu Ala Lys Ser Gln Val
 995 1000 1005
 Thr Thr Val Lys Leu Thr Gln Asp Leu Phe Gly Thr Gly Gly Asn Thr
 1010 1015 1020
 Thr Gly Lys Gly Ile Ser Ala Thr Leu His Val Thr Ser Asn Pro Val
 1025 1030 1035 1040
 His Ala Ala Asp Ser Pro Ala Lys Ala Ser Ser Ala Ser Ala Pro Ser
 1045 1050 1055
 Ser Thr Pro Thr Gly Thr Thr Val Val Lys Val Thr Pro Asp Leu Lys
 1060 1065 1070
 Pro Thr Glu Ala Ser Ser Ser Ala Phe Arg Leu Met Pro Ala Leu Gly
 1075 1080 1085
 Val Ser Val Ala Asp Gln Lys Gly Lys Ser Thr Val Ala Ser Ser Glu
 1090 1095 1100
 Ala Lys Pro Ala Ala Thr Ile Arg Ile Val Gln Gly Leu Gly Val Met
 1105 1110 1115 1120
 Pro Pro Lys Ala Gly Gln Thr Ile Thr Val Ala Thr His Ala Lys Gln
 1125 1130 1135
 Gly Ala Ser Val Ala Ser Gly Ser Gly Thr Val His Thr Ser Ala Val
 1140 1145 1150
 Ser Leu Pro Ser Met Asn Ala Ala Val Ser Lys Thr Val Ala Val Ala
 1155 1160 1165
 Ser Gly Ala Ala Ser Thr Pro Ile Ser Ile Ser Thr Gly Ala Pro Thr
 1170 1175 1180
 Val Arg Gln Val Pro Val Ser Thr Thr Val Val Ser Thr Ser Gln Ala
 1185 1190 1195 1200
 Gly Lys Leu Pro Thr Arg Ile Thr Val Pro Leu Ser Val Ile Ser Gln
 1205 1210 1215
 Pro Met Lys Gly Lys Ser Val Val Thr Ala Pro Ile Ile Lys Gly Asn
 1220 1225 1230
 Leu Gly Ala Asn Leu Ser Gly Leu Gly Arg Asn Ile Ile Leu Thr Thr
 1235 1240 1245
 Met Pro Ala Gly Thr Lys Leu Ile Ala Gly Asn Lys Pro Val Ser Phe
 1250 1255 1260
 Leu Thr Ala Gln Gln Leu Gln Gln Leu Gln Gln Gly Gln Ala Thr
 1265 1270 1275 1280
 Gln Val Arg Ile Gln Thr Val Pro Ala Ser Xaa Leu Gln Gln Gly Thr
 1285 1290 1295
 Ala Ser Gly Ser Ser Lys Ala Val Ser Thr Val Val Val Thr Thr Ala
 1300 1305 1310
 Pro Ser Pro Lys Gln Ala Pro Glu Gln Gln
 1315 1320

<210> 4829

<211> 1605

<212> DNA

<213> Homo sapiens

<400> 4829

4010

4009

acattggcca agtcccaggt taccacagtc aaattgaccc aggacctctt cgggacagga
 5280
 ggcaacacta caggcaaagg catctctgcc accttacacg tcacttccaa tccagtacat
 5340
 gcagctgata gccctgccaa ggccagttca gccagtgcc cttcatccac tccaacaggt
 5400
 accactgtgg tcaaagtac tcctgacctc aagccaacag aagcctcaag ttcggctttt
 5460
 cgcttgatgc cagctcttgg cgtgagtggt gctgaccaga agggaaaaag cacagtggcc
 5520
 tcttcagaag caaaaccagc tgccacgac cgcacgtgc agggactggg agtgatgcct
 5580
 cccaaagcag gccagaccat caccgttgca accacgcca agcaaggggc ctcggtggcc
 5640
 agtgggtctg gaactgtcca tacttcagcg gtgtccttac ccagtatgaa tgctgctgtg
 5700
 tccaagactg tagctgtggc ttctggggct gcaagcacc ccacagcat cagcacagga
 5760
 gccccaccg tgcggcaggt ccctgtcagc accacggttg tgtccacgtc ccaggctggg
 5820
 aagttgccta caggatcac agttcccctc tctgtgatca gccagccaat gaagggaag
 5880
 agcgtggtca cagccccat catcaaaggc aacctggag ccaacctcag tgggttgggc
 5940
 cgcaacatca tctcacaac tatgccagca ggactaagc tcattgctgg caataagcct
 6000
 gttagtttcc tcaactgtca gcagttgcag cagcttcagc agcaaggtca ggccaacag
 6060
 gtgcgcatcc agactgtccc tgcacccnat ctccaacagg gaacagcttc tggctcctcc
 6120
 aaagcagtct ccaactgtgt tgtgactaca gctccgtctc ctaaacaggc acctgagcaa
 6180
 caatgattat gagagaggat gggcttccgt gaaagaccat gcctgggtctg tcttggtga
 6240
 gaagggaacca gggaggttgc atcattatc taagctt
 6277

<210> 4828

<211> 1322

<212> PRT

<213> Homo sapiens

<400> 4828

Met Asp Ser Arg Gly Leu Pro Ala Trp Thr Ser Gln Ser Thr Glu Ile
 1 5 10 15
 Ser Thr Cys Gly Glu Glu Thr Met Asp Ser Leu Asp His Met Leu Thr
 20 25 30
 Asp Pro Leu Glu Leu Gly Pro Cys Gly Asp Gly His Gly Thr Arg Ile
 35 40 45
 Met Glu Asp Cys Leu Leu Gly Thr Arg Val Ser Leu Pro Glu Asp
 50 55 60
 Leu Leu Glu Asp Pro Glu Ile Phe Phe Asp Val Val Ser Leu Ser Thr
 65 70 75 80
 Trp Gln Glu Val Leu Ser Asp Ser Gln Arg Glu His Leu Gln Gln Phe

cgagctgttc cttccagttt ctctccattt gttgaattca aagagaaaac ccagcagtg
3660
aagttgcttg gccaatccca agataatgaa aaggaattag ctgccctctt ccagctatgg
3720
ctagagacca aagatcaggc cttctgtaag caagaaaatg aagacagctc agatgccaca
3780
acacctgtcc ctccggtaag aactgactat gtgggtgcgtc ccagcacggg ggaggagaaa
3840
cgggtttttc aggagcagga gcgttacagg tatagccaac ccataaggc gttcaccttt
3900
cgcatgcacg gctttgagtc tgtggtgggg ccagtgaagg gcgtgtttga caaggagacc
3960
tcgctcaaca aggetcggga gcactccctg ctgcgctccg accggcctgc ctacgtcacc
4020
attctgtctc ttgttcggga cgctgcggct cgactgccta atggagaagg cacacgggca
4080
gagatctgtg aactgcttaa ggactccag tttcttgac cagatgtcac cagcactcag
4140
gtaaatacag tagtgagtgg tgcactggat cggctacatt acgaaaaaga tcctgtgtg
4200
aaatacgaca ttggacgaaa gctgtggatc tacctgcac gtgaccggag tgaagaagag
4260
tttgagcgga ttcaccaagc acaagcagct gcagctaaag ccagaaaagc tcttcagca
4320
aaacccaagc ccccatccaa ggtgaagtcc agtagcaagg agagctccat aaaggtcctt
4380
agcagtggcc cttctgagca gagccagatg agcctcagtg actccagtat gccaccacc
4440
ccagtcacac ctgtaacccc caccacacca gcattgcccg ccattcccat ctcccctcca
4500
cctgtatcgg cagtgaacaa aagcggccct tccacagtct cagaaccagc taagtctagc
4560
tcgggtgttc ttctggtgtc ttcaccaaca atgccacatc tgggaacaat gctttccca
4620
gcttcagacc agactgcacc cagttctcag gctgccgcc gggctcgtgag ccactctggc
4680
tctgtggac tgtctcaggt gcgagtgggt gccagccta gccttctgc tgttccccag
4740
cagtccggag ggccggcaca gacattgcca cagatgccag caggaccgca gatccgggtt
4800
ccagccactg ccacacagac caaagtagtg cccagacag taatggccac tgtgccgctc
4860
aaagcgcaga ctacggcagc cactgtgcag cggcctggac ccgggcagac agggctcacg
4920
gtgacaagtc tcctgccac agccagccct gtgagtaagc cagccacgag ttctcctggg
4980
acctctgtc ccagtgcctc caggctgcc gtcattcaaa atgtcacagg acagaacatc
5040
atcaagcagg tggcaatcac tgggcagctt ggtgtgaagc cccaaacagg caacagcatt
5100
ccactcacag ccactaactt ccgcatccag ggtaaggatg tattgcgtct gccgcctct
5160
tccatcacca cagatgccaa gggccagacg gttctgcgaa tcactccgga catgatggcc
5220

ctctccgcct cgctcgagcgc tgctggaaaa tggcgagggg gcgcggaagc ctccggcgtct
2040
gggagcccgcc gcccgagaaa gggctgcggg ttagggggcc ggcccccgcg gtccaggatt
2100
ccagaattgg aaataacggg agggaggacc tggccagct tcccttcctc aaataaggaa
2160
attgacacct ggcgtgagaa ggggttttgc catgttcgct aggctggtct caaactcatg
2220
gattcaaggg gactgcccgc ctggacctcc caaagtactg agattagtac ctgtggagaa
2280
gaaacaatgg attccttaga ccatatgctg acagatcctc tggaacttgg tccgtgtgga
2340
gatggccatg gcacgcgcac catggaggat tgcctcctgg gaggcaccag agttagtctg
2400
cccaggagacc ttctggagga tcctgagatc ttctttgatg ttgtcagcct ctcaacatgg
2460
caggaagtgt taagtgattc tcaacgtgaa cacctccagc agtttctgcc ccagtttctc
2520
gaagacagtg ctgagcagca gaatgaactc atcttagcct tgttcagtgg ggagaacttc
2580
cgctttggaa accctctgca cattgcccag aagcttttcc gagacggaca ctttaacccc
2640
gaggtggtca agtaccggca gttatgcttc aagtcacagt acaagcgcta cctcaactcc
2700
cagcagcagt atttccatcg gctgctgaag caaattcttg cttcccggag tgatctgctg
2760
gagatggccc ggcggagtgg ccccgccctt cccttcgggc agaaacgccc ttcaccatcc
2820
cgcacacctg aggagcggga gtggcggacc cagcagcgt acttgaaggt ctttaaggaa
2880
gtgaaagagg agtgtggtga cacagccctg tcctctgatg aagaggatct cagctcatgg
2940
cttccgagct ctccagcacg ttctcctagt cctgcggtgc ccctgcgggt ggtgcccaca
3000
ctttcaacca cggatatgaa aactgcagat aaagtagaac tgggggacag tgacctgaag
3060
ataatgttaa agaagcacca cgagaagcgg aaacatcagc cagatcaccg ggaccttttg
3120
acaggggacc tgactctcaa tgacatcatg actcgagtaa atgctggcag gaagggctct
3180
ctggcagcct tatatgactt ggctgtcctt aaaaaaagg ttaaggaaaa agaggaaaag
3240
aagaagaaga aaataaaaac gatcaaatca gaggcagagg acctggccga gccgctaagc
3300
agtactgaag gggctgcacc tctctcacag gccccctctc cgctggcaat tctgctatc
3360
aaggaagagc cccttgaaga cctcaagcct tgccttggaa tcaatgaaat atcttcagc
3420
ttcttctctc ttctattaga gatcttgctg ctggagagtc aggctagcct tcctatgcta
3480
gaggagcgag ttttggattg gcagtcacg ccagccagct ccctcaacag ctggttctct
3540
gcggccccc actgggctga gttggtacta ccagccctgc agtatcttgc tggagaaagt
3600

aagcagtgt catgaaataa gagaaaataa attaaaaatc catagcatag gtaaggaggc
420
tctagtctgg agcacagctg agtttccagc aatataagga ggctcgaaag tttcttttat
480
aagaatgcct gctagcaagg gttccagcaa ggtggttggg tggctctgtaa gtcagtcttg
540
agtacttgaa acagttctgt gtttgttttt tttccttagc gtttagaata gccatcattg
600
tcctgcaata ggcagagcta tcacgtccag gaaaaatgag ggaggggaacc acagaggcag
660
cgtgagatcc aaatacagca ttcaaaggta attggtccag tggcgctggg ggagggagga
720
aggggtgatac tccagggtta gccgtcttct tttgggggtg tgtaccagcc gttttttttc
780
gtggatctgc accaaggact tgtaggactg ctgtgctctt gtcagactgt attgagattt
840
gttggctcca aactgcactc gtgctttccc cttcaccagt gtggcactga tctgcatgat
900
gaccgattct attgagtagg cactgctcca gccctgtttg gtgagaagtt ccatgcagat
960
ggccccctcg ccagaaacat accctccaga gaggactgga gacacaaccc tgacaaatgg
1020
tgggtcaaag ggaaagtatt ctttaaagga aaagttaagt agaataagt cggctccttc
1080
tttctctttg aggatctgga gatcggttg caaagcgctg tcctgggtcaa ctttgaggag
1140
tttaacattc caatcataca gactgtcatt cagcagttcc actgaataaa tcctgtttt
1200
ataactctgt gatcggtata tatccctgag ctctttcctc agccggtcag tggcctgcac
1260
cgagccagac actgcacat ttaaatggtc ttgcctttga gtctttttta tttctctaa
1320
tattgccaaa tttctttttt caattccttc atcctctgac ttttccac taataggctc
1380
ttcttcttc atctcatagt gatctaagtc ttctatatct tcagccatct cttcttcttc
1440
ttcttcttct tctgaagtca cttcttctgt tgteccattc tgaccctggg gtagtggttg
1500
atctagcatc tcaacatcca ggtgcttagg aagggttatat aaactgcaga gttcacatat
1560
caaccacttc aattgctgac gaagcaaatt gttgttctta gtatcttcta gacgttccag
1620
aactgatgtc agatttgggt cttcagaatc cacaacccat atcgggtgaag aagatggata
1680
ggattccgtg atgttgcatg ggagcgtgag tggcgggcggc agcgagtgcg ggctgccttg
1740
ctgcggcacc aggaactggc agtgcagctc gtccagcttc caactgacga tgcggaatcg
1800
ctcgtggttc ttgtcgaaga tggacgccag gaacttcagc tcggccttga gccctgacac
1860
ggacatcttc cctcatctc cggcgggagg ggcgcggaag gggagccggg cgcggaaggg
1920
gagccgggccc cggagccgcc gtcacggccc cgaccgcccc gcgggcccgc ctgggcccgc
1980

gtgtatgtgg ctgtggccct ccctcgtgga ggtgccgtgc tttaaagagg ccttagtgcc
2040
cgggatgggc acagtgtttt gaagggaggt gggagctctt gctctcctgg tcaactgcaga
2100
atgacagaga aggtgaagct ccatgcatgt gtgcgcgggt gtatgtgcgc tcagggctctc
2160
tggttaagta tcagctaaag atgtgcttcc tccgtgtctg tcatacactg agaccaacag
2220
gctacagtgt ccctgattct tggaaaagcc tggagaagct ggggagatgc ggttcacaat
2280
gcctcgggtat aggaggctgt gttgagctga cattcaaatg gattctttta taataatgaa
2340
actggcgagt atttattgtg caaaaaaaaa aaaaaaaaaa
2380

<210> 4826

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4826

Leu	Glu	Lys	Val	Ile	Lys	Asp	Thr	Glu	Ser	Leu	Phe	Lys	Thr	Arg	Glu
1				5					10					15	
Lys	Glu	Tyr	Gln	Glu	Thr	Ile	Asp	Gln	Ile	Glu	Leu	Glu	Leu	Ala	Thr
			20					25					30		
Ala	Lys	Asn	Asp	Met	Asn	Arg	His	Leu	His	Glu	Tyr	Met	Glu	Met	Cys
		35				40						45			
Ser	Met	Lys	Arg	Gly	Leu	Asp	Val	Gln	Met	Glu	Thr	Cys	Arg	Arg	Leu
	50					55					60				
Ile	Thr	Gln	Ser	Gly	Asp	Arg	Lys	Ser	Pro	Ala	Phe	Thr	Ala	Val	Pro
65					70					75				80	
Leu	Ser	Asp	Pro	Pro	Pro	Pro	Pro	Ser	Glu	Ala	Glu	Asp	Ser	Asp	Arg
			85					90						95	
Asp	Val	Ser	Ser	Asp	Ser	Ser	Met	Arg							
			100					105							

<210> 4827

<211> 6277

<212> DNA

<213> Homo sapiens

<400> 4827

ntaattaaca ccacgttttc agcctaccac attgtagttt ggcaggccag gctctgcatt
60
ccaagggggc aggtgctggt tgctccagag gccttgagga gaaatctagg ggcagaccag
120
gtgtgtgctt cagctccaag tttctcttgc tttagcagca aaatgcggcc tctcatctct
180
accaaagcaa cagtggactc gtaccctccc ccacctccca agtagttcag gggatggggg
240
gggatgtgcy aataaaaata aagatgagtc aagaccagca tcttcaaatt aacaaactgt
300
aattgttttc ccaaagatac atttttttca tacacatcca tcatacactg taaccaaaaa
360

gcaagggcct gggttgtmgt ggggtgcaccc ggatgggggtg ggcgtccaga tcgacacccat
420
cacgcccgag atccgcgctc tctacaacgt gctggccaaa gtgaagcggg agcgggacga
480
gtacaagcgg aggtgggaag aggagtacac ggtgcggatc cagctgcaag accgtgtaaa
540
tgagctccag gaggaagccc aggaggctga tgccctgccag gaggagctgg cactgaaggt
600
ggaacagttg aaggctgagc tgggtgtctt caaggggctc atgagtaaca acctgtcggg
660
gctggacacc aagatccagg agaaagccat gaaggtggat atggacatct gccgccgcat
720
cgacatcacc gccaaagctct gcgatgtggc tcagcagcgc aactgcgagg acatgatcca
780
gatgttccag aagaagctgg tcccatccat gggggggcgg aagcgggagc gcaaggctgc
840
cgtcaggagag gacacctccc tgtcggagag tgagggggccc gccagcccga tggggatgag
900
gaggagagca cagccctcag catcaacgag gagatgcagc gcatgctcaa ccagctgagg
960
gagtatgatt ttgaggacga ctgtgacagc ctgacttggg aggagactga ggagaccctg
1020
ctgctttggg aggatttctc aggctatgcc atggcagctg cagaggccca gggagagcag
1080
gaagatagcc tggagaaggt gattaaagat acggagtccc tgttcaaaac ccgggagaag
1140
gagtatcagg agaccattga ccagatagag ctggagttgg ccacggccaa gaacgacatg
1200
aaccggcacc tgcacgagta catggagatg tgcagcatga agcgcggcct ggacgtgcag
1260
atggagacct gccgccggct catcacccag tctggagacc gaaagtctcc tgctttcact
1320
gcggtccccg ttagcgaccc gccgccggcg ccaagcgagg ctgaggactc cgatcgcgat
1380
gtctcatctg acagctccat gagatagaga cctgcctccc ccttgacccc gaggccctcg
1440
cagcagggag ctacgcgagg cagaggggtg ggctgcacag aggggaacat cagctgcagc
1500
tctgcaccag gccggtcctt ggggactggg gcgctcctcc ctcaggcttt ctccctcagt
1560
cttggtctct ccagggtctt ggggtgtctg gagctaggct tggccctacc attctggggc
1620
catttcacc acagttgggg ctctcctgcc ttcacgcgtg ggtgtctgct acttccccat
1680
ctttaaaatg ctgccagagc gattgcggcc cctcaccttg tccacgtatc aggaatgtga
1740
atgtgggacc ttctctccat ccctgttgtc cggagccagc tcaactgtct ccacactggg
1800
gctaactggc ccaggcactg gagtggaaata gaatgcagct ggaggctacg catggcctct
1860
gcagcacagc cagctggaga gggcttctgt ccctgtcagc ggcagagggc gttggggctg
1920
gccggggcac cttgtccctg ctatggcca catgctcagc ctgtccacct gccagggtga
1980

275 280 285
 Gly Gln Pro Ile Ser Ala Ser Gln Leu Asn Ile Gly Gly Val Met Gly
 290 295 300
 Asn Leu Gly Pro Gly Gly Met Gly Met Asp Gly Pro Gly Phe Gly Gly
 305 310 315 320
 Met Asn Arg Ile Gly Gly Gly Ile Gly Phe Gly Gly Leu Glu Ala Met
 325 330 335
 Asn Ser Met Gly Gly Phe Gly Gly Val Gly Arg Met Gly Glu Leu Tyr
 340 345 350
 Arg Gly Ala Met Thr Ser Ser Met Glu Arg Asp Phe Gly Arg Gly Asp
 355 360 365
 Ile Gly Ile Asn Arg Ala Phe Gly Asp Ser Phe Gly Arg Leu Gly Ser
 370 375 380
 Ala Met Ile Gly Gly Ile Thr Gly Arg Ile Gly Ser Ser Asn Met Gly
 385 390 395 400
 Pro Val Gly Ser Gly Ile Ser Gly Gly Met Gly Ser Met Asn Ser Val
 405 410 415
 Thr Gly Gly Met Gly Met Gly Leu Asp Arg Met Ser Ser Ser Phe Asp
 420 425 430
 Arg Met Gly Pro Gly Ile Gly Ala Ile Leu Glu Arg Ser Ile Asp Met
 435 440 445
 Asp Arg Gly Phe Leu Ser Gly Pro Met Gly Ser Gly Met Arg Glu Arg
 450 455 460
 Ile Gly Ser Lys Gly Asn Gln Ile Phe Val Arg Asn Leu Pro Phe Asp
 465 470 475 480
 Leu Thr Trp Gln Lys Leu Lys Glu Lys Phe Ser Gln Cys Gly His Val
 485 490 495
 Met Phe Ala Glu Ile Lys Met Glu Asn Gly Lys Ser Lys Gly Cys Gly
 500 505 510
 Thr Val Arg Phe Asp Ser Pro Glu Ser Ala Glu Lys Ala Cys Arg Ile
 515 520 525
 Met Asn Gly Ile Lys Ile Ser Gly Arg Glu Ile Asp Val Arg Leu Asp
 530 535 540
 Arg Asn Ala
 545

<210> 4825

<211> 2380

<212> DNA

<213> Homo sapiens

<400> 4825

nnagagaatt cggcacgggt ggagaagcaa ctgcagcaag ctctggagga gggtaagcag
 60
 ggccggcggg gcctgggggtc gtcgcgacca ggcagtgcag accggcttcg tcagcyccat
 120
 ccggccccctg gggcbkcagc tgggcgcccc gccggccgct gtctgcagcc ctttgagcg
 180
 cgtkctgggc tcgcccgcgc gctccccggc cggccccctc gcgccctccg cggccagcct
 240
 ctgctgtcc tccacctcca cctccaccac ctattctctg tcggcccgt tcatgcccgg
 300
 caccatctgg tcgttctcgc acgnccgccc gctcggggccg ggactggagc ccactctggt
 360

atcagtggca gagaaattga tgttcgcttg gatcgtaatg cataatttca agccatgggt
 1740
 ggaacattcc tacatctgtt ttgctgaatc tcctagtaaa agtcattttt ttaaagtaat
 1800
 attgtatgct tacaaaagct gtaaaaatga acttttaaaa ctcccaccag cttttaacag
 1860
 gtataatggg aaaaatatac tgtaaatttt tggtaatctc aagtttgggt ttttaaagac
 1920
 agcaagtctg gtcattcagt ttaaatgaat gggatatactg gtttttaatg aaataagcca
 1980
 tttt
 1984.

<210> 4824

<211> 547

<212> PRT

<213> Homo sapiens

<400> 4824

Met	Glu	Asn	Asp	Glu	Ser	Ala	Lys	Glu	Glu	Lys	Ser	Asp	Leu	Lys	Glu
1				5				10					15		
Lys	Ser	Thr	Gly	Ser	Lys	Lys	Ala	Asn	Arg	Phe	His	Pro	Tyr	Ser	Lys
		20						25				30			
Asp	Lys	Asn	Ser	Gly	Thr	Gly	Glu	Lys	Lys	Gly	Pro	Asn	Arg	Asn	Arg
		35					40					45			
Val	Phe	Ile	Ser	Asn	Ile	Pro	Tyr	Asp	Met	Lys	Trp	Gln	Ala	Ile	Lys
	50					55					60				
Asp	Leu	Met	Arg	Glu	Lys	Val	Gly	Glu	Val	Thr	Tyr	Val	Glu	Leu	Phe
65					70				75					80	
Lys	Asp	Ala	Glu	Gly	Lys	Ser	Arg	Gly	Cys	Gly	Val	Val	Glu	Phe	Lys
			85					90						95	
Asp	Glu	Glu	Phe	Val	Lys	Lys	Ala	Leu	Glu	Thr	Met	Asn	Lys	Tyr	Asp
		100						105					110		
Leu	Ser	Gly	Arg	Pro	Leu	Asn	Ile	Lys	Glu	Asp	Pro	Asp	Gly	Glu	Asn
		115					120					125			
Ala	Arg	Arg	Ala	Leu	Gln	Arg	Thr	Gly	Gly	Ser	Phe	Pro	Gly	Gly	His
		130				135					140				
Val	Pro	Asp	Met	Gly	Ser	Gly	Leu	Met	Asn	Leu	Pro	Pro	Ser	Ile	Leu
145					150				155					160	
Asn	Asn	Pro	Asn	Ile	Pro	Pro	Glu	Val	Ile	Ser	Asn	Leu	Gln	Ala	Gly
			165					170					175		
Arg	Leu	Gly	Ser	Thr	Ile	Phe	Val	Ala	Asn	Leu	Asp	Phe	Lys	Val	Gly
		180					185					190			
Trp	Lys	Lys	Leu	Lys	Glu	Val	Phe	Ser	Ile	Ala	Gly	Thr	Val	Lys	Arg
		195					200					205			
Ala	Asp	Ile	Lys	Glu	Asp	Lys	Asp	Gly	Lys	Ser	Arg	Gly	Met	Gly	Thr
	210					215					220				
Val	Thr	Phe	Glu	Gln	Ala	Ile	Glu	Ala	Val	Gln	Ala	Ile	Ser	Met	Phe
225					230				235					240	
Asn	Gly	Gln	Phe	Leu	Phe	Asp	Arg	Pro	Met	His	Val	Lys	Met	Asp	Asp
			245					250					255		
Lys	Ser	Val	Pro	His	Glu	Glu	Tyr	Arg	Ser	Pro	Asp	Gly	Lys	Thr	Pro
		260						265					270		
Gln	Leu	Pro	Arg	Gly	Leu	Gly	Gly	Ile	Gly	Met	Gly	Leu	Gly	Pro	Gly